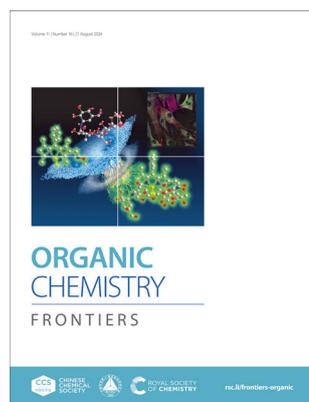


### IN THIS ISSUE

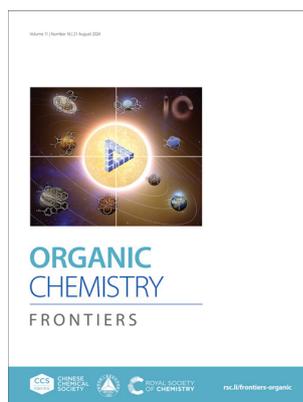
ISSN 2052-4129 CODEN OCFRA8 11(16) 4345-4640 (2024)



#### Cover

See Ana M. Gómez, Jorge Bañuelos, J. Cristobal Lopez *et al.*, pp. 4356–4365.

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#### Inside cover

See Mukund P. Sibi *et al.*, pp. 4560–4601.

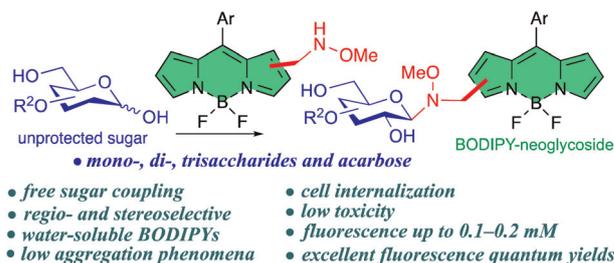
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### RESEARCH ARTICLES

4356

#### Chemoselective reaction of methoxyaminomethyl BODIPYs with unprotected carbohydrates: a powerful tool for accessing BODIPY neoglycosides

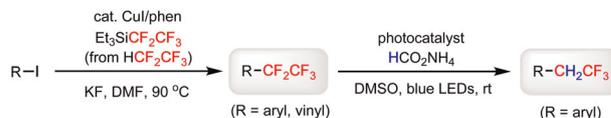
Ana M. Gómez,\* Luis García-Fernández, Andrés G. Santana, Clara Uriel, Leire Gartzia-Rivero, Jorge Bañuelos,\* Inmaculada Garcia-Moreno, Lourdes Infantes, María Rosa Aguilar and J. Cristobal Lopez\*



4366

#### Copper-catalyzed pentafluoroethylation of aryl/alkenyl iodides with pentafluoroethylsilane

Yihan Tang and Gavin Chit Tsui\*



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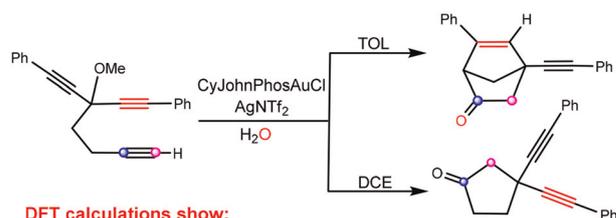
Fundamental questions  
Elemental answers

## RESEARCH ARTICLES

4371

### Insights into the mechanism and origin of solvent-controlled chemodivergence in the synthesis of Au-catalyzed bicyclo[2.2.1]heptanes from 3-alkoxy-1,6-diyne: a DFT perspective

Aili Feng and Dongju Zhang\*



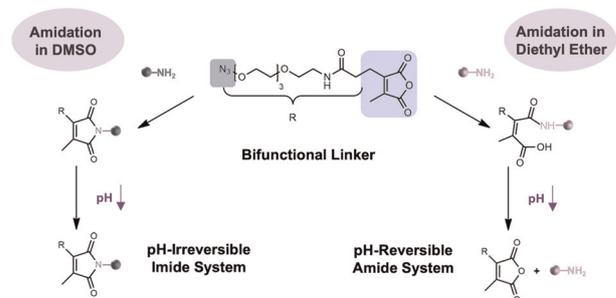
DFT calculations show:

- a new pathway for the formation of the bridged ring
- an essential allyl-gold species controlling the chemodivergence
- valuable insights for the preparation of bridged ring systems

4380

### Restoring the pH-responsiveness for amine-conjugated 2-propionic-3-methylmaleic anhydride linkers

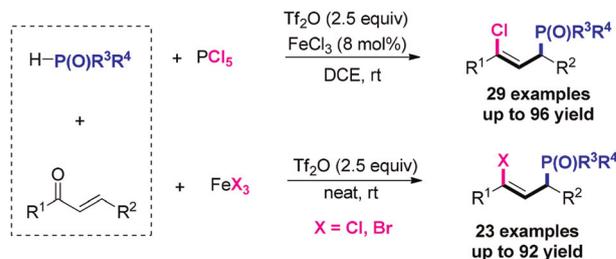
Alina G. Heck and Lutz Nuhn\*



4385

### Lewis acid-catalyzed phosphinoylation and halogenation of $\alpha,\beta$ -unsaturated ketones: access to $\gamma$ -halo allylic phosphonates

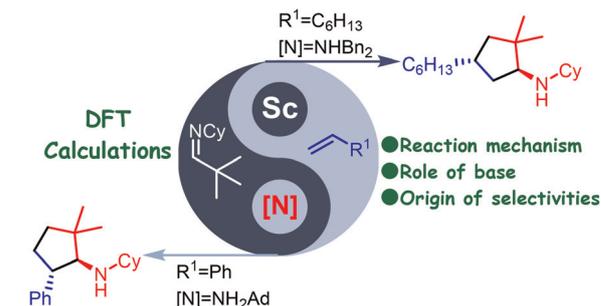
Xiao-Hong Wei,\* Ya-Wen Xue, Chun-Yuan Bai, Xuan Liu, Xiao-Hong Wang, Yan-Bin Wang and Qiong Su\*



4391

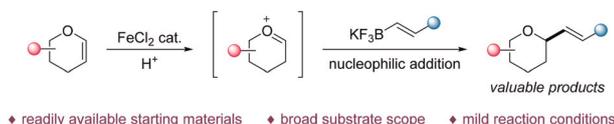
### Elucidating the mechanism and origin of diastereoselectivity in scandium-catalyzed $\beta$ -C(sp<sup>3</sup>)-H activation and transformation of an aliphatic aldimine

Yiran Zhang and Yang Wang\*



## RESEARCH ARTICLES

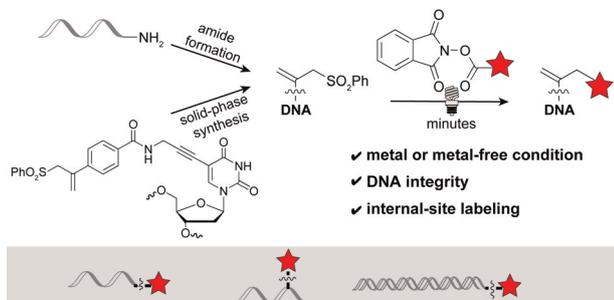
4402



### Brønsted acid-mediated selective $\alpha$ -alkenylation of 3,4-dihydro-2H-pyrans

Nan Chen, Chaokun Li, Shangteng Liao, Jinglong Chen,\*  
Xingxing Ma and Qiuling Song\*

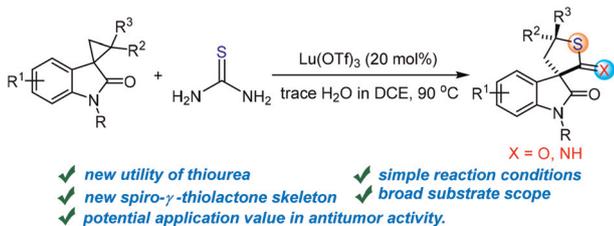
4408



### Site-specific DNA post-synthetic modification via fast photocatalytic allylation

Ying Huang, Yixin Zhang, Chenchen Hu and  
Yiyun Chen\*

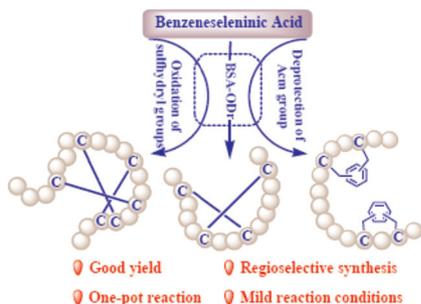
4416



### A domino [3 + 2] cycloaddition/deamination/imine hydrolysis reaction of cyclopropyl spirooxindoles with thiourea for access to spiro- $\gamma$ -thiolactone oxindoles

Hai-Ting Wang, Xiao-Lin Wen, Xiao-Lin Xu,  
Dong-Chao Wang\* and Hai-Ming Guo\*

4423



### Benzeneseleninic acid used as an oxidizing and deprotecting reagent for the synthesis of multi-cyclic peptides constrained by multiple disulfide bonds and thioether bridges

Yueyue Xing, Tianyu Bo, Nan Zhang, Meiqi Wu,  
Jiawei Wang, Shigang Shen,\* Yafang Wang,  
Changying Song, Tiesheng Shi\* and Shuying Huo\*



## RESEARCH ARTICLES

4436

### Photo-induced synthesis of fluoroalkylated quinolinones via an iron-catalyzed LMCT decarboxylation process

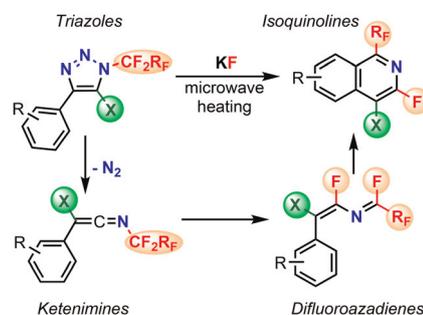
Zhuoheng Song, Lin Guo, Chao Yang\* and Wujiong Xia\*



4442

### One-pot multistep synthesis of 1-fluoroalkylisoquinolines and fused fluoroalkylpyridines from *N*-fluoroalkyl-1,2,3-triazoles

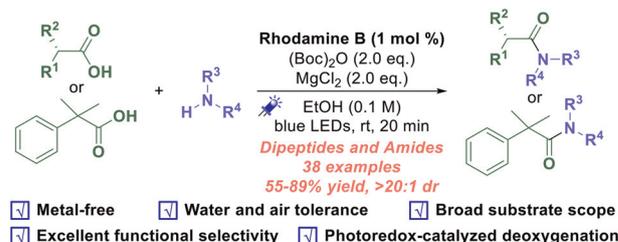
Anna Kubičková, Svatava Voltrová, Adam Kleman, Blanka Klepetářová and Petr Beier\*



4449

### A visible light-induced deoxygenative amidation protocol for the synthesis of dipeptides and amides

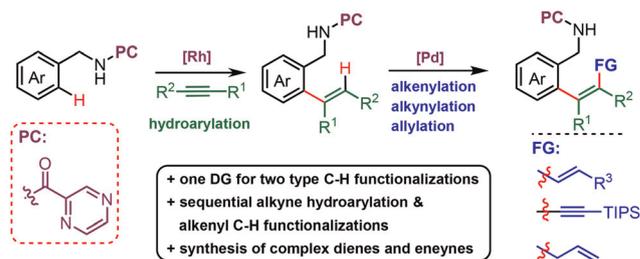
Ji-Wei Ren,\* Cheng-Shuai Han, Huai-Xin Zhang, Qing-Hao Zhang, Xian-Ting Song and Jing-Hui Sun



4456

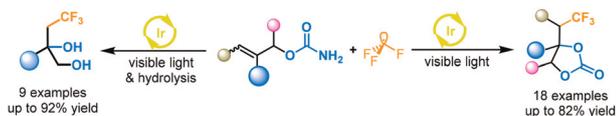
### Stereo-selective synthesis of complex dienes and enynes by sequential hydroarylation and olefinic C–H functionalization

Yuhang Zhu, Xiaoli Li, Cheng Zhang, Xiuying Liu, Linzhi Huang, Yongbo Zhang, Chao Shen,\* Liyuan Ding, Guofu Zhong\* and Jian Zhang\*



## RESEARCH ARTICLES

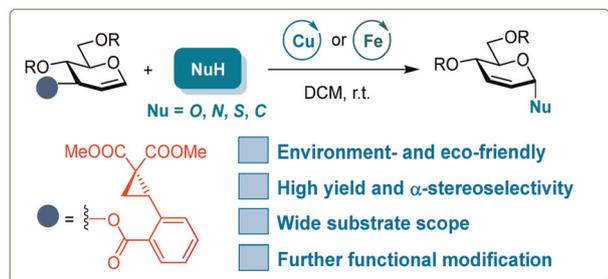
4464



### Photoredox-catalyzed oxytrifluoromethylation of alkenes toward CF<sub>3</sub>-containing five-membered cyclic carbonates

Yihui Mao, Xiangquan Wang, Chengcheng Zhong, Jinkang Jin and Zhan Lu\*

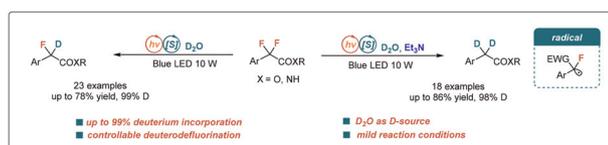
4470



### Stereoselective strain-release Ferrier rearrangement: the dual role of catalysts

Huajun Zhang, Aoxin Guo, Han Ding, Yuan Xu, Yuhan Zhang, Dan Yang and Xue-Wei Liu\*

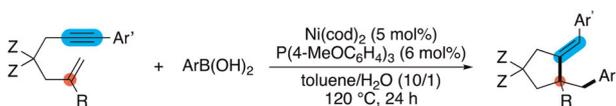
4479



### Photoredox-catalyzed selective deutero-defluorination of $\alpha,\alpha$ -difluoroarylacetic esters and amides

Zi-Hang Yuan, Hong Xin, Yuan Gao, Guo-Wei Sun, Rui-Ying Zhao, Xin-Hua Duan and Li-Na Guo\*

4487



### Nickel-catalyzed arylation of unactivated alkenes: arylation of unactivated alkene moieties

Jian Gao, Qi Wei, Zeqing Zhang, Zhishan Su,\* Jialin Ming\* and Yongmin Zhang\*

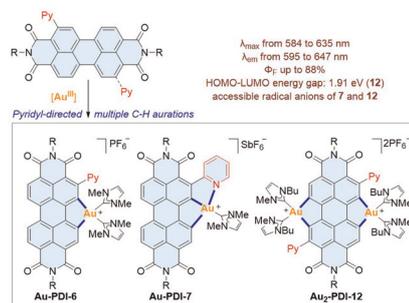


## RESEARCH ARTICLES

4496

## Direct synthesis of gold(III)-annulated perylene diimides via multiple C–H aurations

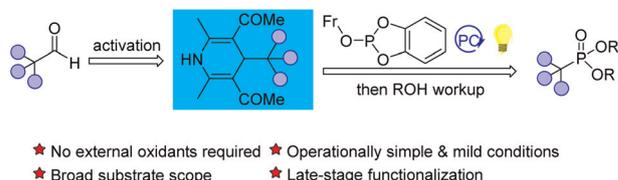
Wei Chen, Qing-Yu Yang, Kongchuan Wu, Jianbin Lin and Hui-Jun Zhang\*



4502

## Facile synthesis of alkylphosphonates from 4-alkyl-1,4-dihydropyridines via photoinduced formal deformylative phosphorylation

Huan Zhang, Zhonghe Cui, Jian Wang, Lin Zhu\* and Chaozhong Li



4508

Photocatalyzed sulfoximination/amidation of (Het) arylethenes tethered *N*-tosyl amide: a versatile entry to sulfoximido-β- and γ-lactams

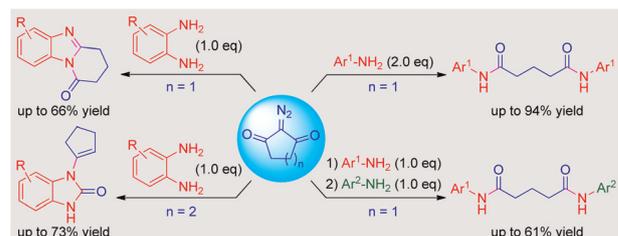
Chengtian Li, Yuming Yang, Xiaolan Zheng, Cairong Zhang, Hui Cai\* and Weilong Lin\*



4516

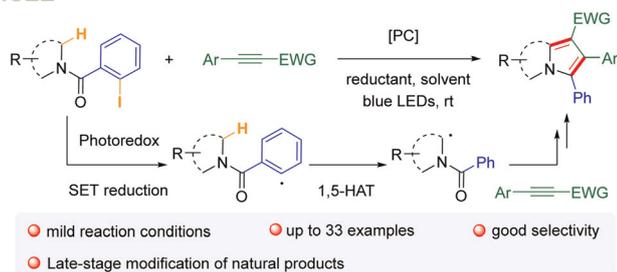
Green synthesis of glutaramides, piperidino[1,2-*a*]benzimidazol-1-ones and *N*-cyclopentenyl benzimidazolones enabled by microwave assisted domino reactions of cyclic 2-diazo-1,3-diketones with aniline derivatives

Cheng Zhao, Xiao-Wei Hu, Yi-Bin Xu, Xiong-Wei Liu,\* You-Ping Tian and Yun-Lin Liu\*



## RESEARCH ARTICLES

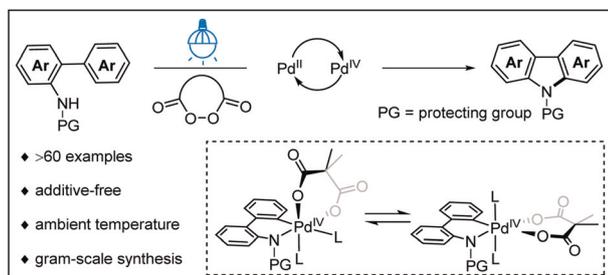
4522



### Visible-light-mediated synthesis of polysubstituted pyrroles via C<sub>Ar</sub>-I reduction triggered 1,5-hydrogen atom transfer process

Junlei Wang,\* Qinglin Xie, Guocheng Gao, Guofen Wei, Xinxin Wei, Xuemei Chen, Daohai Zhang,\* Hongqing Li and Binbin Huang\*

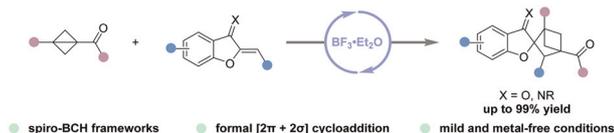
4529



### Palladium(II)-catalyzed intramolecular C–H amination to carbazole: the crucial role of cyclic diacyl peroxides

Ting Yuan, Kang Fu and Lei Shi\*

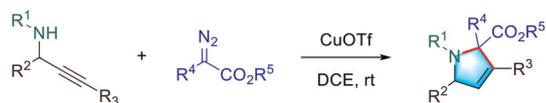
4539



### Access to spiro-bicyclo[2.1.1]hexanes via BF<sub>3</sub>·Et<sub>2</sub>O-catalyzed formal [2π + 2σ] cycloaddition of bicyclo[1.1.0]butanes with benzofuran-derived oxa(aza)dienes

Jia-Yi Su, Jian Zhang, Zhi-Yun Xin, Hao Li,\* Hanliang Zheng\* and Wei-Ping Deng\*

4546



### A copper-catalyzed annulation reaction of diazo esters with propargyl amines for the synthesis of 2,5-dihydropyrroles

Haodong Xie, Wei Zhao, Heping Wei, Yang Yu, Lili Zhao, Jonathan B. Baell and Fei Huang\*



