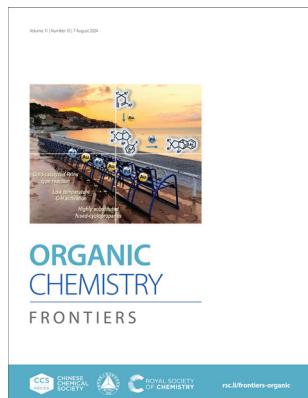


IN THIS ISSUE

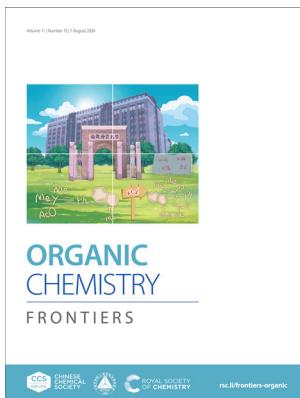
ISSN 2052-4129 CODEN OCFRA8 11(15) 4057–4344 (2024)



Cover

See Véronique Michelet *et al.*, pp. 4070–4076.

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Inside cover

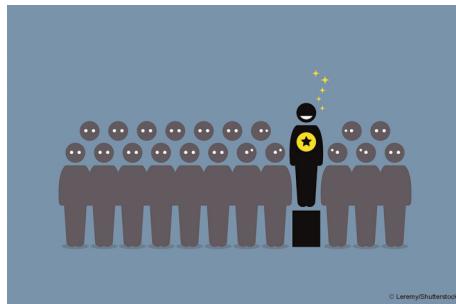
See Shenghan Teng, Shoulei Wang, Wei Huang *et al.*, pp. 4077–4083.

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EDITORIAL

4068

Outstanding Reviewers for *Organic Chemistry Frontiers* in 2023

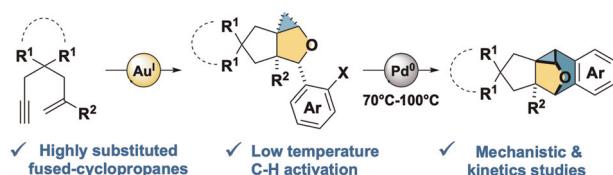


RESEARCH ARTICLES

4070

Au- and Pd-catalyzed cyclization processes: synthesis of polyfunctionalized cyclopropanes

Alexis Truchon, Aurélien Dupeux, Sandra Olivero and Véronique Michelet*





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Elemental answers

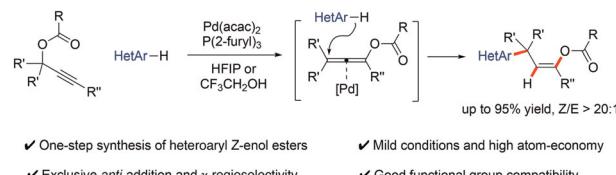
Registered charity number: 207890

RESEARCH ARTICLES

4077

Palladium(II)-catalyzed 1,3-heteroaryl acyloxylation of propargylic electrophiles

Shenghan Teng,* Peiyao Liang, Lin Hu, Siyi Chen, Shoulei Wang* and Wei Huang*



✓ One-step synthesis of heteroaryl Z-enol esters

✓ Exclusive *anti*-addition and γ -regioselectivity

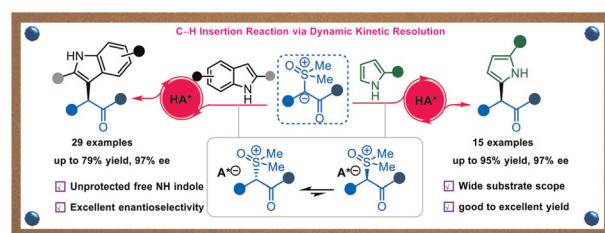
✓ Mild conditions and high atom-economy

✓ Good functional group compatibility

4084

Enantioselective synthesis of unsymmetrical α,α -diarylacetates via organocatalyzed formal C–H insertion reactions of sulfoxonium ylides with indoles and pyrroles

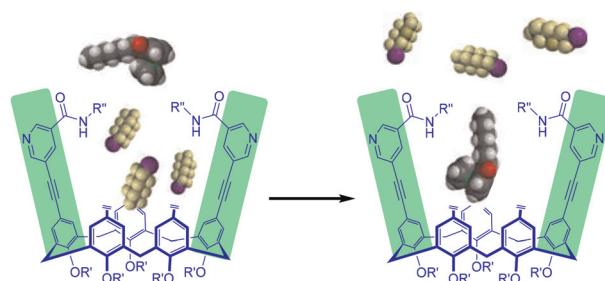
Xin Yue, Shi-Jia Li, Tianyuan Ou, Zhenying Xiong, Feng Jiang, Ying Zhou, Lijuan Song,* Yupei Zhao* and Wengang Guo*



4094

Enhancing the binding of calix[5]arene containers for ferrocenes by a fluorophobic effect through the release of high-energy perfluoro-1-iodoalkanes

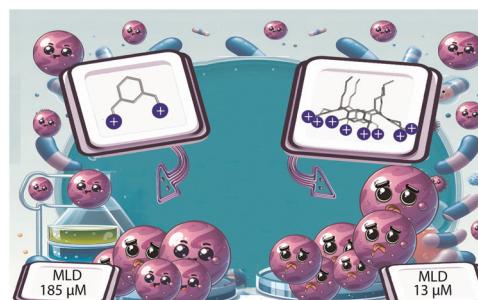
Jiabin Xing, Qihan Lin, Sheng-Yi Zhuang, Gang Wu, Jiangshan Zhang, Hui Wang, Dan-Wei Zhang* and Zhan-Ting Li*



4101

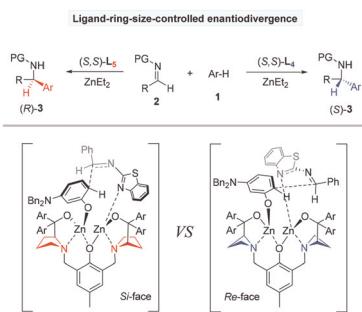
Novel octacationic-resorcin[4]arennes featuring quaternary ammonium groups as multivalent biocides

Vittoria Ferrara, Veronica Iuliano,* Placido Neri, Silvano Geremia, Neal Hickey, Luca Di Stasio, Giovanni Vigliotta,* Gaetana Paolella, Ivana Caputo, Paolo Della Sala, Carmine Gaeta and Carmen Talotta*



RESEARCH ARTICLES

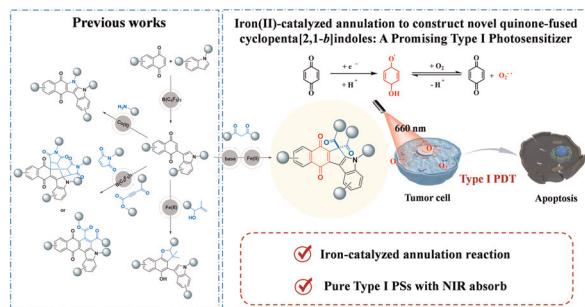
4109



Reversal of enantioselectivity by tuning the ring size of ProPhenol

Xu-Yi Huang, Na Li, Yu-Hang Miao, Yuan-Zhao Hua,* Min-Can Wang, Li-Ping Xu* and Guang-Jian Mei*

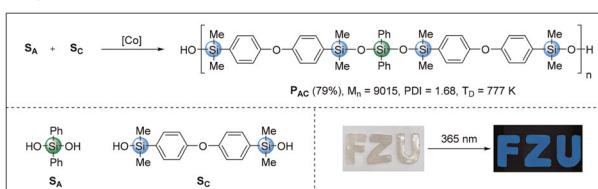
4119



Iron(II)-catalyzed annulation to construct novel quinone-fused cyclopenta[2,1-b]indoles: a promising type I photosensitizer

Hong Xu, Xiao-Chun Liu, Bei Wang, Fu-Yu Li, Dong-Wei Huang, Yao Xiao, Ning Ma, Ya-Hui Zhang* and Ji-Yu Wang*

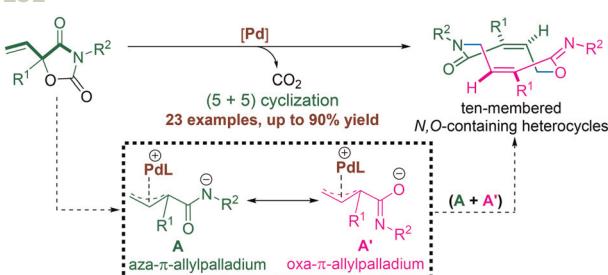
4125



Cobalt-catalyzed dehydrative approach for the synthesis of unsymmetric disiloxanes and polysiloxanes

Bing-Bin Yang, Peng Guo, Xinglei He and Ke-Yin Ye*

4131



A palladium-catalyzed decarboxylative (5 + 5) cyclization reaction of vinyloxazolidine-2,4-diones: access to ten-membered N,O-containing heterocycles

Xiao-Hui Fu, Juan Liao, Zhen-Hua Wang,* Zhen-Zhen Ge, Ming-Qiang Zhou, Yong You, Yan-Ping Zhang, Jian-Qiang Zhao, Ji-Hong Lu and Wei-Cheng Yuan*

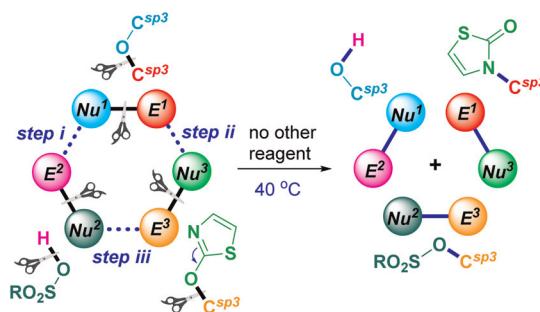


RESEARCH ARTICLES

4138

Three-component formal metathesis *via* remote activating strategy enabled (RASE) domino activation of two C(sp³)–O bonds in alkyl ethers

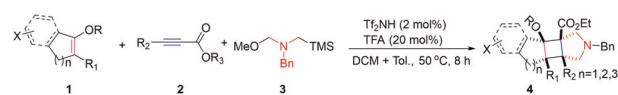
Dailin Zhuang, Le Cheng, Yichuan Yan, Yuting Tang, Zhenyang Wan, Jiahao Gu, Yuhong Lu, Xinyao Li* and Ziyan Li*



4149

Synthesis of polysubstituted fused pyrrolidines *via* [2 + 2]/[2 + 3] cycloaddition of azomethine ylides

Chunyan Ou, Jian Wang, Pingping Yin, Bin Chen, Peng Hu, Bi-Qin Wang, Peng Cao* and Minghui Xu*



4156

An efficient platform for decarboxylative functionalization of carboxylic acids using sulfuryl fluoride: Pd-catalyzed decarboxylative dehydrogenation of alkanecarboxylic acids and decarboxylative cross-coupling of arenecarboxylic acids

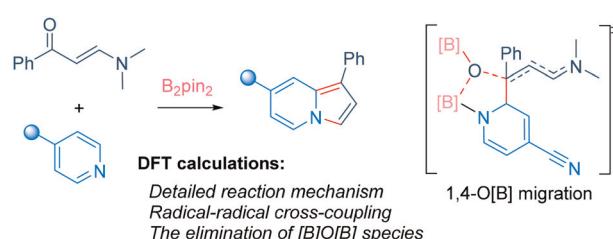
Chenfei Guan, Huijie Qi, Linjun Han, Guofu Zhang,* Jinghui Lyu and Chengrong Ding*



4168

A pyridine-boryl radical mediated cascade reaction towards the synthesis of indolizines: a computational mechanistic analysis

Xinyu Zhang, Xiangxue Cao, Lanfeng Wei, Zhijun Wang, Yu Wei,* Liang Xu* and Genping Huang*



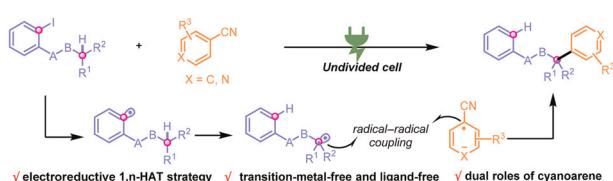
RESEARCH ARTICLES

4176

**Selective C2 and C3 phosphorylmethylation of indoles with a phosphorylmethyl dibenzothiophenium reagent**

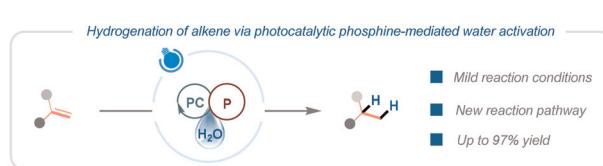
Xiaomin Shi, Hongmei Qu,* Yaxing Wu, Fei Wang and Chao Chen*

4182

**An aryl-to-alkyl radical relay arylation reaction of a remote C(sp³)-H bond using 1,4-dicyanobenzene as an electrochemical redox-mediator**

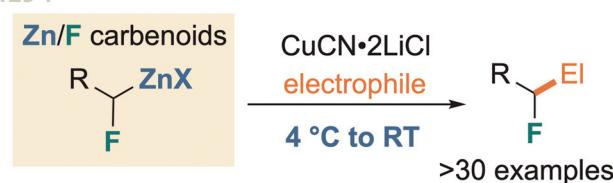
Weijie Yu, Hongjie Zhang, Zhipeng Shen, Lingyun Yang, Jin Luo,* Wendong Li, Kuang Zhao, Xiaolong Li, Jiale Xu, Yuan Zhou* and Tao Wang*

4187

**Photoredox-catalyzed hydrogenation of alkenes assisted by an *in situ* generated PPh₃(OH) radical and acetic acid**

Zhen-Zhen Xie, Yu Zheng, Zi-Hao Liao, Chu-Ping Yuan, Ming-Zhi Li, Ke-Yi Deng, Hao-Yue Xiang, Kai Chen* and Hua Yang*

4194



- ✓ stable (half-lifetime = 2.5~19 h at 23 °C)
- ✓ elucidated structure & decomposition pathway
- ✓ applicable to various monofluoroalkylation

Zn/F carbenoids: preparation, structures, stability, and application to nucleophilic monofluoroalkylation

Kazuhiro Morisaki,* Kohei Miyamoto, Emiko Kawaguchi and Yoshihiro Sato*

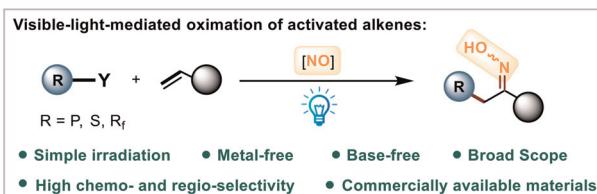


RESEARCH ARTICLES

4207

A general photochemical strategy for the oxidation of activated alkenes without a catalyst

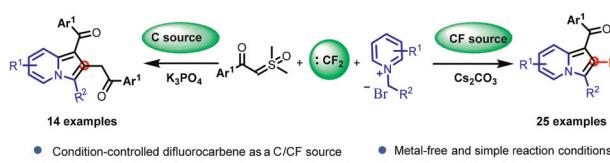
Hongyan Lan, You Su, Yikun Chen, Xiaozhi He* and Dingyi Wang*



4214

Base-controlled selective cleavage of the C–F bond of difluorocarbene for the divergent assembly of indolizines

Chun-Yan Wu, Xiang-Long Chen, Dong-Sheng Yang,
Yong-Xing Tang, Li-Sheng Wang, Yan-Dong Wu,
Shi-Yi Zhuang* and An-Xin Wu*



4219

Pd-catalyzed relay Heck arylation of alkenyl alcohols with arylsulfonium salts

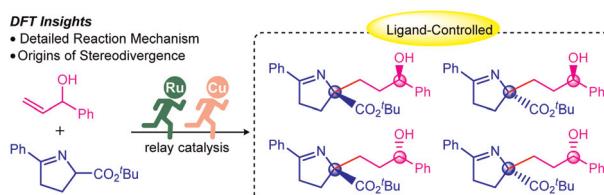
Jia-Wei Song, Fang Xia, Xiu-Lan Zhang and
Cheng-Pan Zhang*



4231

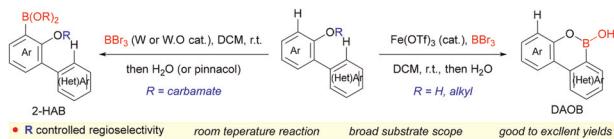
Copper/ruthenium relay catalysis for stereodivergent construction of 1,4-nonadjacent stereocenters: mechanistic investigation using DFT calculations

Congcong Huang, Biyao Yang, Keying Zhang and
Juan Li*



RESEARCH ARTICLES

4249



Directing group controlled regioselective C–H borylation of 2-arylphenolic compounds at room temperature

Jiao Kang, Jing Liu and Zhilong Chen*

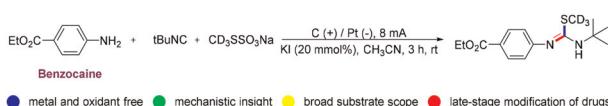
4258



A pyrene–calix[4]triazolium conjugate for fluorescence recognition of hydrogen sulfate

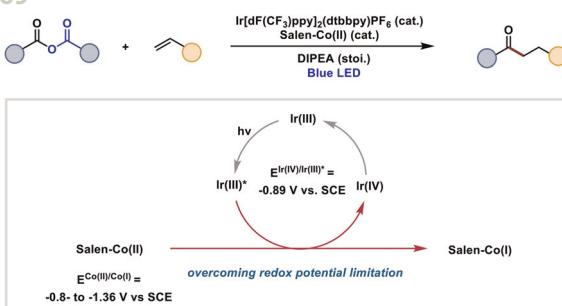
Jihee Cho, Rakesh Parida, Changhyun Lim, Jin Yong Lee,* Jong Seung Kim* and Sanghee Kim*

4264

Electrochemical aminotriideuteromethylthiolation of isocyanides with anilines and $\text{CD}_3\text{SSO}_3\text{Na}$

Lin Zhao, Xinyu Zhou, Kemeng Zhang, Siyu Han and Ge Wu*

4269



Ir/Co dual catalyzed hydroacylation of electron-deficient alkenes overcoming redox potential limitations

Yi Zhou, Yong-Qin He, Xia Nie, Lin Lu, Xian-Rong Song, Zhao-Zhao Zhou, Wan-Fa Tian* and Qiang Xiao*

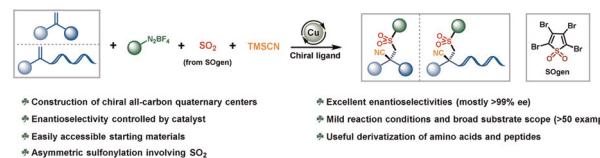


RESEARCH ARTICLES

4275

Access to chiral sulfones with an all-carbon quaternary stereocenter from sulfur dioxide

Chunxi Huang, Xuemei Zhang, Liping Luo, Xiuwen Jia, Jian Liao* and Zhong Lian*



4284

Direct C–H sulfonylation of hydrazones involving the insertion of SO_2

Mengzhao Yu, Shuzhen Lin, Shuoshuo Zhang, Xinkui Lin and Xiaolei Huang*

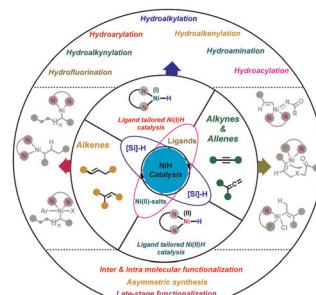


REVIEWS

4290

Silanes as a versatile hydride source for Ni–H catalysis: a promising tool for π -hydro functionalization

Yafia Kousin Mirza, Partha Sarathi Bera, Sachin Balaso Mohite, Ajeet Kumar Pandey and Milan Bera*



4318

Electroreduction strategy: a sustainable tool for the generation of aryl radicals

Xiao-Qing Xie, Wei Zhou, Ruchun Yang, Xian-Rong Song, Mu-Jia Luo* and Qiang Xiao*

