## **ORGANIC** CHEMISTRY

## FRONTIERS

rsc.li/frontiers-organic

### IN THIS ISSUE

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ORGANIC

CHEMISTRY FRONTIERS

**Cover** See Hideto Ito, Kenichiro Itami *et al.*, pp. 1880–1889.

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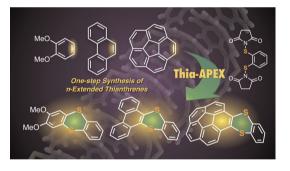
The artwork was created by Dr Issey Takahashi (Nagoya University).

## **RESEARCH ARTICLES**

#### 1880

One-step synthesis of polycyclic thianthrenes from unfunctionalized aromatics by thia-APEX reactions

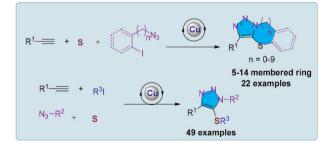
Kou P. Kawahara, Hideto Ito\* and Kenichiro Itami\*



#### 1890

Copper(I)-catalyzed multicomponent interrupted click reaction: modular synthesis of triazole sulfides from elemental sulfur

Pengfei Sun, Weiguo Wang, Jilong Lai, Huang Yan, Chen-Ho Tung and Zhenghu Xu\*



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## FRONTIERS

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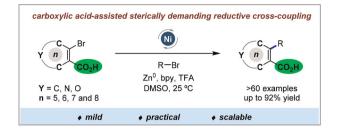
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#### 1897

# Carboxylic acid-assisted sterically demanding reductive cross-coupling between cycloalkenyl and alkyl bromides

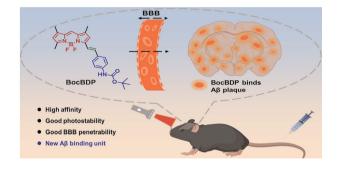
Jinglin An, Xue Zhou, Yifan Zhang, Zhenfei Ye, Qianyou Guo, Hao Song, Zhenlei Song,\* Xiao-Yu Liu and Yong Qin\*



## 1903

# A BODIPY-based probe for amyloid- $\boldsymbol{\beta}$ imaging in vivo

Mingguang Zhu, Guoyang Zhang, Ziwei Hu, Chaofeng Zhu, Yixiang Chen, Tony D. James,\* Lijun Ma\* and Zhuo Wang\*



#### 1910

# Asymmetric synthesis of 7-membered-ring-bridged 3,4-fused tricyclic indoles *via* Friedel–Crafts alkylation/annulation

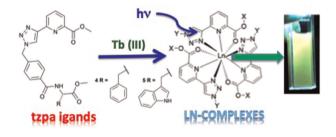
Bai-Yu Xue, Chen-Ying Hou, Xiao-Bing Wang, Ming-Sheng Xie\* and Hai-Ming Guo\*



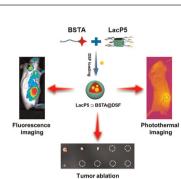
#### 1915

#### Synthesis of $\alpha$ -amino acid derived (1,2,3-triazol-4-yl)-picolinamide (tzpa) ligands and their corresponding luminescent Tb(III) complexes

Isabel N. Hegarty, Chris S. Hawes and Thorfinnur Gunnlaugsson\*

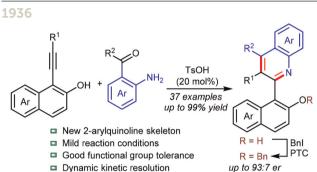


#### 1927



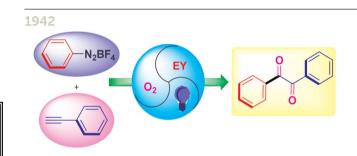
#### A supramolecular near-infrared nanophotosensitizer from host-guest complex of lactose-capped pillar[5] arene with aza-BODIPY derivative for tumor eradication

Jiaxuan Li, Xiaomeng Lv, Jiahui Li, Wenjuan Jin, Zelong Chen, Yafei Wen, Zhichao Pei and Yuxin Pei\*



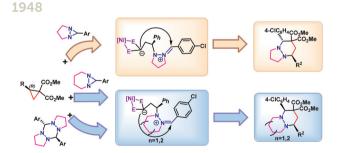
#### Synthesis of quinol-type heterobiaryls via an acid-catalyzed heteroannulation of alkynes and o-aminobenzaldehydes

Qing-Song Jian, Bo-Bo Gou, Shao-Jie Wang, Huai-Ri Sun, Atif Sharif, Yong-Qiang Wang, Ling Zhou\* and Jie Chen\*



#### Transition metal-free, photocatalytic arylation and dioxygenation for vicinal diketone synthesis using alkynes and arene diazonium salts

Baoli Zhao, Xiaoting Yin, Haifeng Li, Kai Cheng\* and Jie-Ping Wan\*



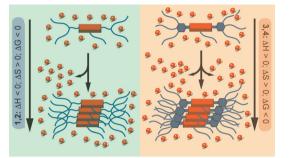
#### A DFT study of Ni-catalyzed (3 + 3)-annulation between donor-acceptor cyclopropanes and diaziridines

Song-Shan Dai, Xiao-jiao Yang, Ran Fang,\* Alexander M. Kirillov and Lizi Yang\*

#### 1959

#### Thermodynamics of the self-assembly of *N*-annulated perylene bisimides in water. Disentangling the enthalpic and entropic contributions

Manuel A. Martínez, Daniel Aranda, Enrique Ortí, Juan Aragó\* and Luis Sánchez\*



### 1968

#### Photochemical difluoromethylation of alkynes: synthesis of CF<sub>2</sub>H-substituted seven-membered dioxodibenzothiazepines and dibenzazepines

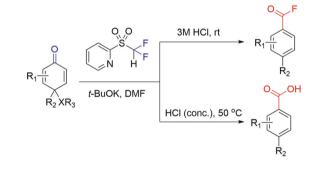
Xiaoyu Chen, Yang Geng, Bo Liu, Yu Zhu, Dapeng Zou,\* Yangjie Wu\* and Yusheng Wu\*



#### 1975

#### Preparation of benzoyl fluorides and benzoic acids from phenols *via* a dearomatization– rearomatization strategy

Meixian Yang, Xinyue Huang, Wenjun Miao, Lan Yi, Jiajing Cai, Zhenghuan Zhao, Jia He\* and Dachuan Qiu\*

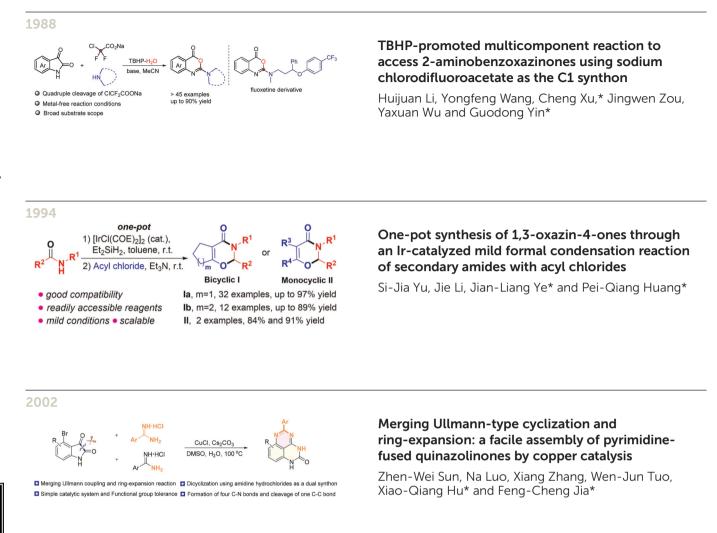


#### 1981

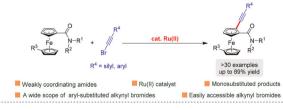
Visible-light-promoted defluorinated alkylation of trifluoromethyl alkenes initiated by radical [1,2]-Brook rearrangement: facile synthesis of *gem*-difluoro homoallylic alcohol derivatives

Tao Qin, Chunlu Xu, Ge Zhang\* and Qian Zhang









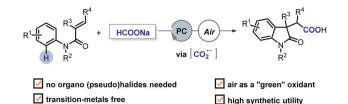
# Ru(II)-catalyzed C–H alkynylation of ferrocenes with bromoalkynes directed by carboxamide groups

Ru-Yuan Zhao, Jing Zhang, Rui-Han Niu, Jin-Heng Li\* and Bo Sun\*

#### 2013

## Transition-metal free oxidative carbocarboxylation of alkenes with formate in air

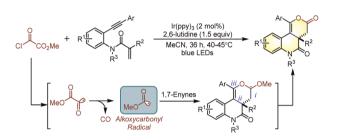
Pei Xu, Hui Xu, Sai Wang, Tian-Zi Hao, Si-Yi Yan, Dong Guo\* and Xu Zhu\*



#### 2018

Visible-light-induced alkoxycarbonylation/cyclization of 1,7-enynes: synthesis of dihydropyranones containing all-carbon quaternary centers

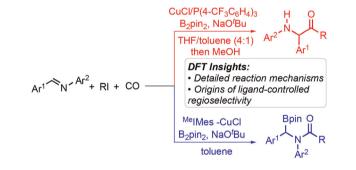
Jian-Qiang Chen, Qi Chen, Baofu Chen\* and Jie Wu\*



#### 2024

Mechanism and origins of ligand-controlled regioselectivity of copper-catalyzed borocarbonylation of imines with B<sub>2</sub>pin<sub>2</sub> and alkyl iodides: a computational study

Xinyi Song, Hongli Wu, Jinjin Yang, Wentao Zhao\* and Genping Huang\*



#### 2033

# Palladium-catalyzed allylic allenylation of homoallyl alcohols with propargylic carbonates

Ping-Xin Zhou,\* Murong Wang, Xiang Li, Xueyan Du, Xiaozhe Yang, Han Wang, Tangqiang Sun,\* Feng Ren\* and Yong-Min Liang





#### Indirect electrochemical reductive cyclization of o-halophenylacrylamides mediated by phenanthrene

Xue-Qi Zhou, Pei-Bo Chen, Qiang Xia, Ting-Kai Xiong, Xue-Jun Li, Ying-Ming Pan, Mu-Xue He\* and Ying Liang\*

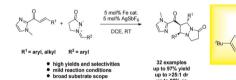
Open Access Article. Published on 11 April 2023. Downloaded on 8/9/2025 6:18:00 PM.



#### Integration of CO<sub>2</sub> capture, activation, and conversion with a ternary acetylglucosyl 2-methylimidazolium modified Pd catalyst

Zhong-Gao Zhou,\* Peng He, Jing Li, Jia Zhang, Guo-Hai Xu, Shi-Yong Zhang, Xiao-Xiao Deng, Zi-Yi Du, Guo-Tian Luo, Hong-Yu Zhen, Yi-Wang Chen and Chun-Ting He\*

#### 2054

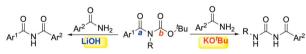


#### Fe-BPsalan complex-catalyzed asymmetric 1,3-dipolar [3 + 2] cycloaddition reaction of N,N'-cyclic azomethine imines with $\alpha,\beta$ -unsaturated acyl imidazoles

Hao Lu, Kai-Ge Chen, Gong-Xin Li, Kun Zhan, Hao-Yang Wang, Zhen-Jiang Xu\* and Chi-Ming Che\*

2061

8



high chemoselectivity = inexpensive, abundant reagents

# broad scope = operatinal-simplicity

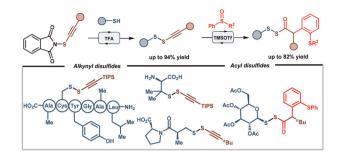
## Cation-controlled chemoselective synthesis of N-aroylureas and imides via amidation of N-Boc arylamides

Jiamin Wang, Sujuan Shuai, Lishe Gan, Yongxin Luo, Huimin Jin, Lingfeng Chen, Dong Zou, Guang Liang,\* Patrick J. Walsh\* and Jie Li\*

#### 2070

Construction of alkynyl and acyl disulfides directly through thiol-modification with *N*-alkynylthio phthalimides under acid catalysis

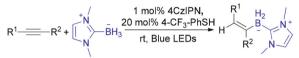
Yao-Nan Xue, Kai Feng, Jun Tian, Juan Zhang, Hong-Hong Chang and Wen-Chao Gao\*



### 2075

Transition metal-free radical *trans*-hydroboration of alkynes with NHC-boranes *via* visible-light photoredox catalysis

Ding-Chang Li, Jia-Hao Zeng, Yu-Hang Yang and Zhuang-Ping Zhan\*



trans-hydroboration

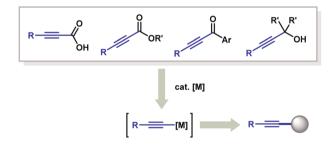
★ metal-free photoredox catalysis
★ good regio- and stereoselectivity
★ mild conditions

#### REVIEWS

#### 2081

Transition metal-catalyzed alkynylation reactions *via* alkynyl carbon–carbon bond cleavage

Hairui Yuan, Qi Zhou and Jianbo Wang\*



#### 2095

## Selective preparative 'oxidase phase' in sesquiterpenoids: the radical approach

Maria Kourgiantaki, Georgia G. Bagkavou, Christos I. Stathakis\* and Alexandros L. Zografos\*

