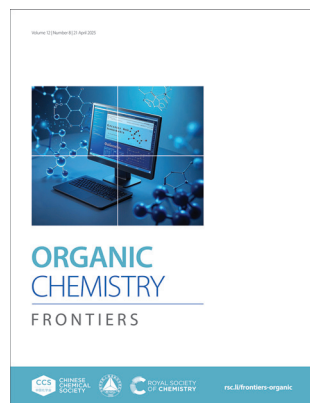


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**Cover**

See Ruisheng Zhao,
Zizhong Liu,
Yongsheng Bao *et al.*,
pp. 2568–2579.

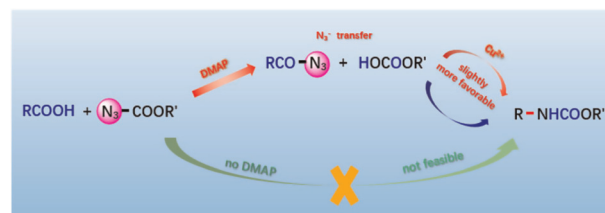
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RESEARCH ARTICLES

2568

Mechanisms of Cu/DMAP-cocatalyzed and DMAP-catalyzed C–N decarboxylative cross-coupling reactions

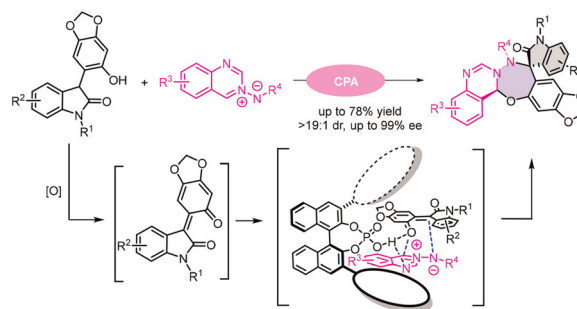
Ruisheng Zhao,* Chaomin Hao, Dan Liu, Zizhong Liu* and Yongsheng Bao*



2580

Asymmetric [4 + 3] cycloaddition of hydroxyphenyl indolinones to synthesize novel spirooxindoles

Shuhui Huang, Yongquan Xu, Mohan Li, Lihuan Liao and Weiwu Ren*





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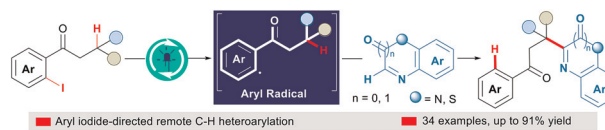
**Fundamental questions
Elemental answers**

RESEARCH ARTICLES

2586

Photoredox β -C(sp³)-H heteroarylation of o-iodoaryl-alkan-1-ones with heteroarenes via HAT and dual C-H functionalizations

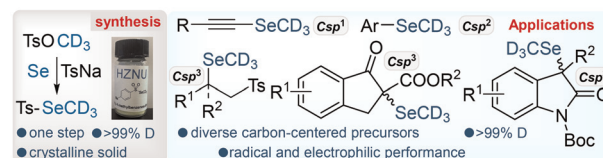
Guang-Chuan Xu, Liang Zeng,* Ming Hu, Fu-Jin Sun* and Jin-Heng Li*



2592

Direct trideuteriomethylselenation with a shelf-stable reagent Se-methyl-d₃ selenosulfonate

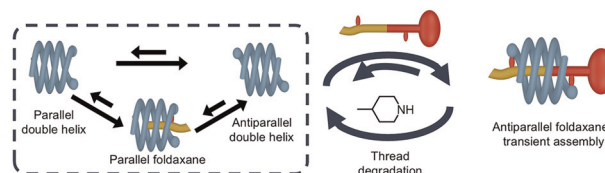
Guofang Guo, Yan Zhang, Ziting Huang, Wen Liu, Xueyi Lu, Zihan Liu, Xu-Qiong Xiao, Ying Bai and Xinxin Shao*



2600

Dissipative formation of a transient foldaxane with a fuel-like thread

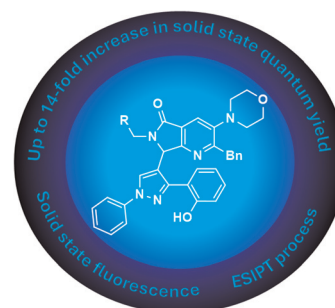
Cheng Feng, Shouzhe Zhu, Shuang Yang, Feifei Xing* and Xiang Wang*



2607

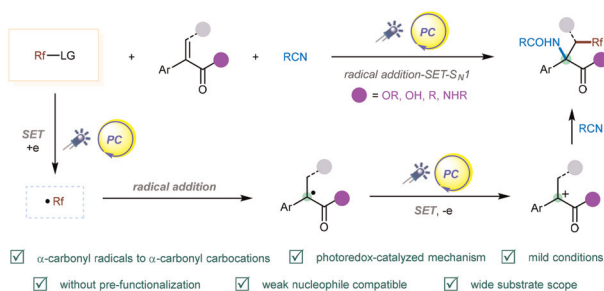
Dual-state emission of pyrazolyl-pyrrolo[3,4-*b*]pyridin-5-ones via excited-state intramolecular proton transfer (ESIPT): multicomponent synthesis and optical characterization

Julio C. Flores-Reyes, Yoarhy A. Amador-Sánchez, Alejandro Valderrama-Celestino, Bertha D. Barrios-Campos, Ricardo A. Peralta, Michael T. Huxley, Ilich A. Ibarra, Alejandro Islas-Jácome, Diego Solis-Ibarra* and Eduardo González-Zamora*



RESEARCH ARTICLES

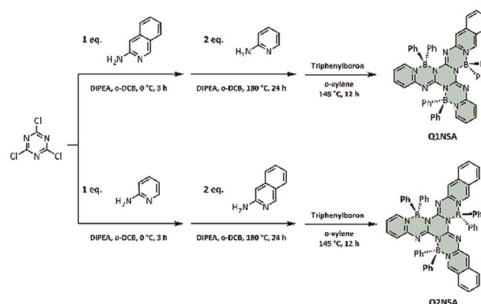
2617



Photoredox-catalyzed generation of α -carbonyl carbocations: general access to α -tertiary amino acid derivatives

Ya-Zhen Zeng, Wang Zhang, Man-Yi Han, Peng Wang* and Hanmin Huang

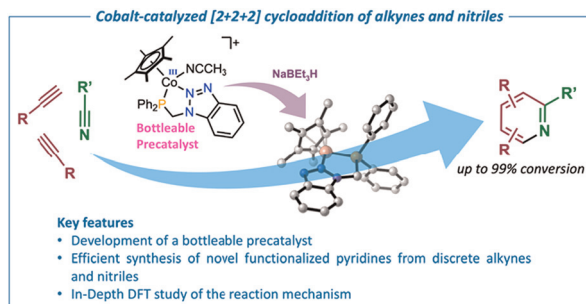
2624



Core-extended nonastarazines featuring diverse arm configurations synthesized *via* one-pot sequential reactions

Honglin Qiu, Jiadong Zhou, Yi Feng, Linlin Liu and Zengqi Xie*

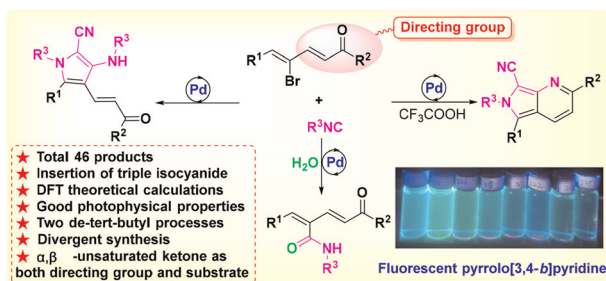
2630



In situ generated cobalt(II) catalyst for the efficient synthesis of novel pyridines: revisiting the mechanism of [2 + 2 + 2] cycloadditions

Susana García-Abellán, Asier Urriolabeitia, Victor Polo* and Manuel Iglesias*

2643



Synthesis of pyrrole derivatives *via* ordered isocyanide insertion reaction driven by ring strain mediated by non-covalent bond interactions

Shan-Shan Liu, Jiang-Nan Zheng, Zhi-Wen Zhao, Yi Zhang, Ping He,* Yong-Jie Wu, Jiang-Tao Feng, Long Wang* and Zhi-Lin Ren*

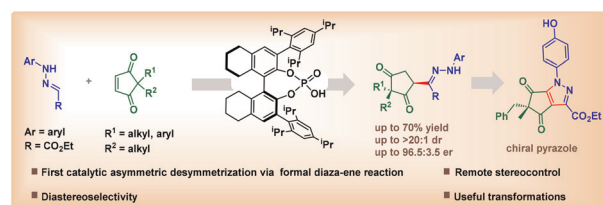


RESEARCH ARTICLES

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Organocatalytic asymmetric desymmetrization of cyclopentene-1,3-diones via a formal diaza-ene reaction with donor-acceptor hydrazones

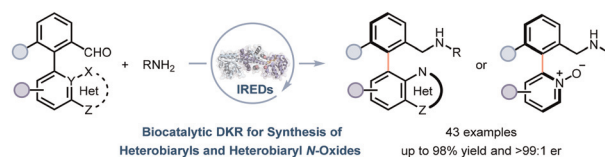
Subhankar Biswas and Subhas Chandra Pan*



2658

Biocatalytic atroposelective synthesis of heterobiaryls and heterobiaryl *N*-oxides via dynamic kinetic resolution

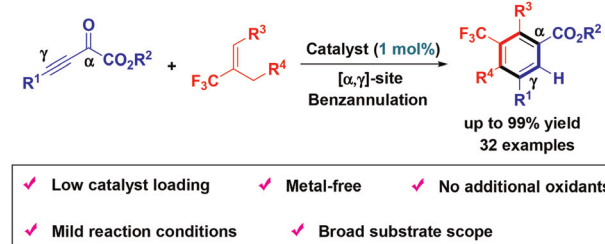
Xinyue Hao, Bin Wang, Zhuangfei Tian, Zhouchang Yao, Tianzhang Qiao, Ling Huang* and Haigen Fu*



2670

Metal-free catalytic *de novo* construction of multi-functionalized trifluoromethylarenes through [3 + 3] benzannulation at low catalyst loadings

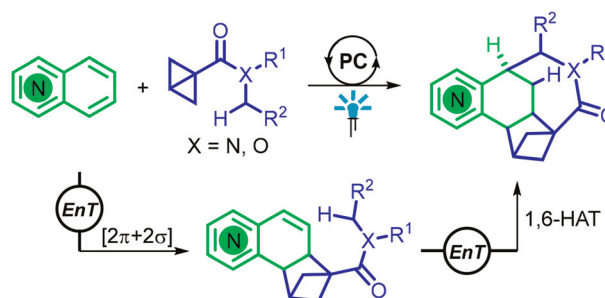
Qing He,* Yu-Qi Xiang, Rui Zhou, Bin Liu, Rong-Hua Wang, Xiang-Kai Kong, Song Bai,* Miao Li,* Guang-Jun Yang* and Gao-Feng Zhu*



2676

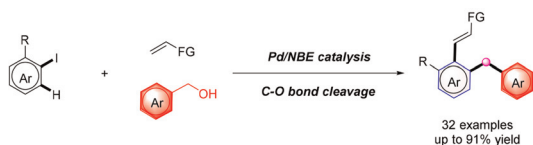
Successive energy-transfer catalytic dearomative reactions of quinolines with bicyclo[1.1.0]butanes for the synthesis of pyridine-fused 3D complicated molecules

Yi-Ping Cai, Shi-Ru Chen and Qin-Hua Song*



RESEARCH ARTICLES

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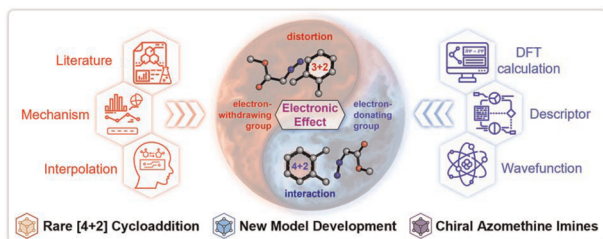


- ☐ mild reaction conditions
- ☐ broad substrate scope
- ☐ obviates preactivation of alcohol
- ☐ in-situ formed isoureas as versatile ortho-benylation reagents
- ☐ simple operation

Deoxygenative *ortho*-benzylation of aryl iodides with benzyl alcohol via palladium/norbornene cooperative catalysis

Shaowen Ling, Shuaichen Zheng, Baolong Xu, Hui Liu, Xinjin Li and Feng-Gang Sun*

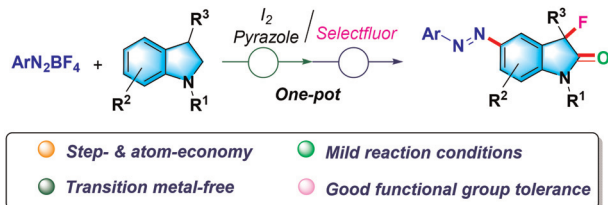
2694



Chiral phosphoric acid catalyzed intermolecular [4 + 2] cycloaddition for the synthesis of chiral azomethine imines: mechanism and stereochemical model

Weichi Chen, Zhongqing Qu, Shuanglin Qu and Abing Duan*

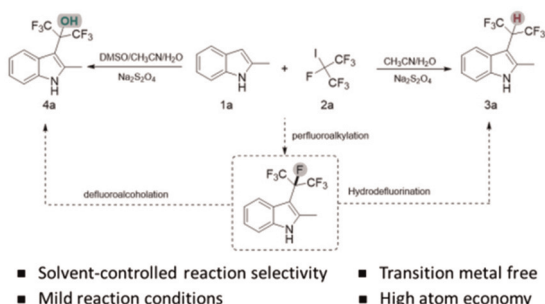
2704



Transition-metal-free synthesis of C3,5-difunctionalized oxindole derivatives

Yifeng Liu, Pengyan Zhang, Liangjie Feng, Zhuan Zhang and Taoyuan Liang*

2709



Selective perfluoroalkylation and defluorination functionalization of indoles

Meina Li, Guizhao Wang and Faqiang Leng*

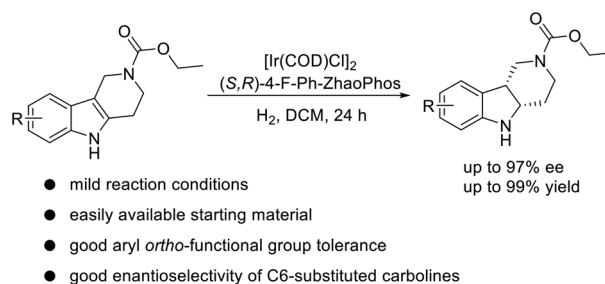


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2714

Iridium-catalyzed asymmetric hydrogenation of tetrahydro- γ -carboline: a versatile approach to chiral *cis*-hexahydro- γ -carboline derivatives compatible with C6-substituted carbolines

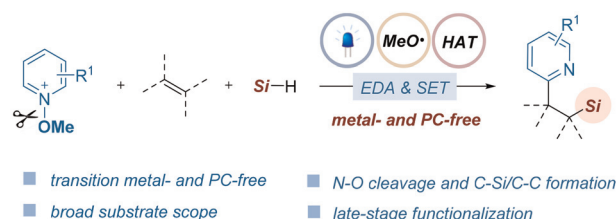
Bowen Liu, Chun Zhang,* Xiuxiu Li* and Xumu Zhang*



2720

Visible light-mediated pyridyl silylation of olefins through hydrogen atom transfer

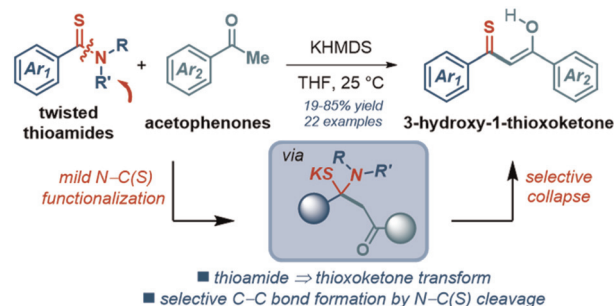
Shan Wang, Ting-Ting Yuan, Jun-Ting Liang, Xiao-Xia Liang, Xuan Deng, Zichen Xu,* Ya-Jian Hu* and Yu-Tao He*



2727

Chemoselective transition-metal-free acylation of thioamides by N–C(S) bond cleavage using acyclic twisted thioamides

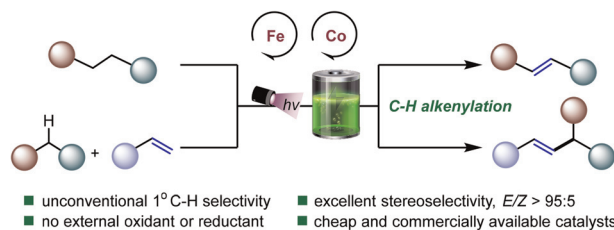
Jin Zhang,* Yang He, Xinhao Zhu, Yan Guo, Xiaogang Wang, Ruihong Wang* and Michal Szostak*



2732

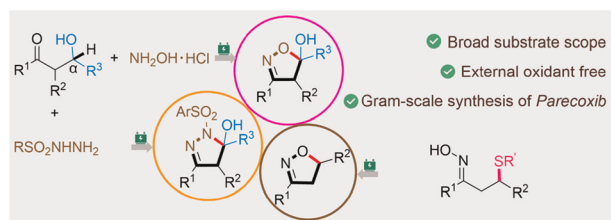
Photoelectrochemical iron–cobalt synergistic catalysis for C(sp³)–H alkenylation

Jia-Lin Tu, Ao-Men Hu, Chao Yang, Lin Guo* and Wujiong Xia*



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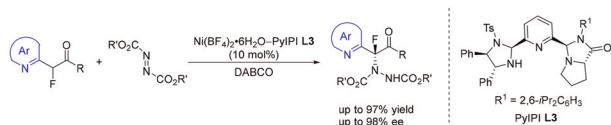
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Electrochemical dehydrogenative and desulfurative annulation for the synthesis of isoxazolines and pyrazolines

Qiang Wang,* Xing Zhang, Xianglin Zhuang, Liwen Xia, Yingwei Wang, Xianrong Cai, Xingyong Liang* and Lebin Su*

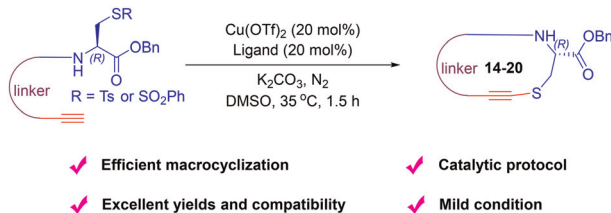
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Ni(II)-catalyzed enantioselective α-hydrazination of α-fluoroesters: access to chiral quaternary α-fluorinated α-amino acid derivatives

Wei-Jing Yang, Jun-Hao Zhang, Ning Li, Ming-Sheng Xie* and Hai-Ming Guo*

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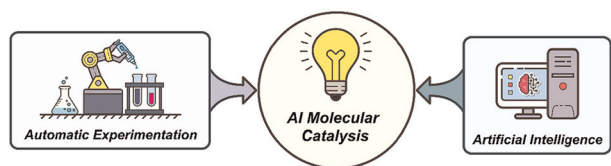


Cu-catalyzed alkynylation of thiosulfonate-based peptide: an efficient approach to S-alkynyl-containing cyclic peptides

Zhou Zhang, Junjie Ying, Qingqing Lu, Qinshuo Zhang and Chunfa Xu*

REVIEWS

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AI molecular catalysis: where are we now?

Zhenzhi Tan, Qi Yang* and Sanzhong Luo*

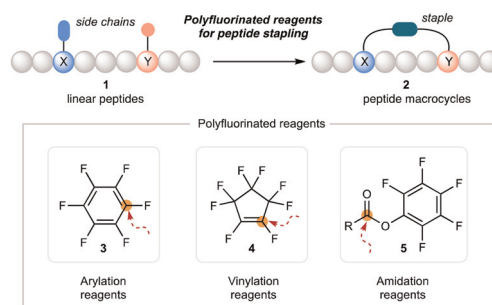


REVIEWS

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Polyfluorinated reagents for peptide stapling

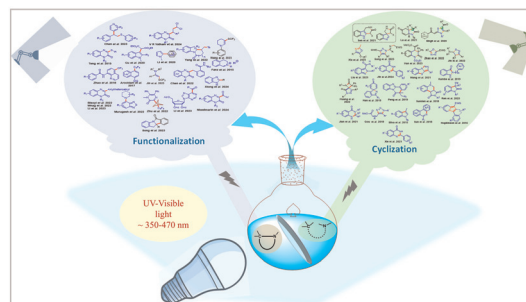
Wanzhen Lin, Xin Ding, Jun-Wei Han, Li-Shuang Yu* and Fa-Jie Chen*



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UV/visible light-promoted external photocatalyst-free transformations: A Decade's Journey of N-heterocycles and their functionalisation

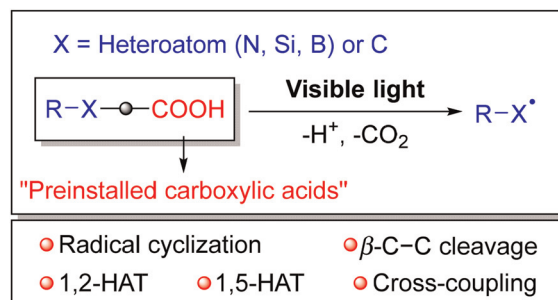
Sudipta Ghara, Paritosh Barik, Shouvik Ghosh, Sandip Ghosh, Arabinda Mandal, Chandana Pramanik, Mohammed Ikbal,* Shubhendu Dhara* and Shubhankar Samanta*



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Photochemical generation of heteroatom (N, Si, B) or carbon radicals leveraging preinstalled carboxylic acids

Chao Tian and Lei Shi*



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Advances in the synthesis of indolizines and their π -expanded analogues: update 2016–2024

Jaqueline S. A. Badaro, Bartosz Godlewski and Daniel T. Gryko*

