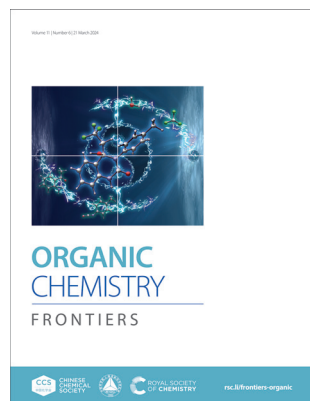


IN THIS ISSUE

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Cover

See Changjun Zhang,
Yuanyuan Xie *et al.*,
pp. 1662–1667.

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2024, **11**, 1662.

EDITORIAL

1653

**Organic Chemistry Frontiers welcomes the
inaugural Early Career Advisory Board**

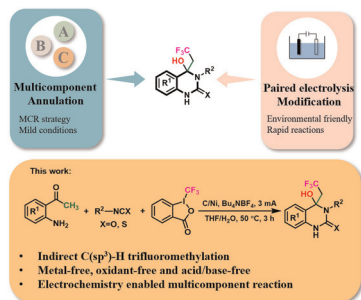


RESEARCH ARTICLES

1662

**An electrochemical multicomponent cascade
annulation and functionalization reaction to enable
C(sp³)-H trifluoromethylation**

Yuxin Ding, Hao Zhang, Dingyuan Lou, Wenkai Huang,
Yuan Shi, Hongmei Luo, Changjun Zhang* and
Yuanyuan Xie*



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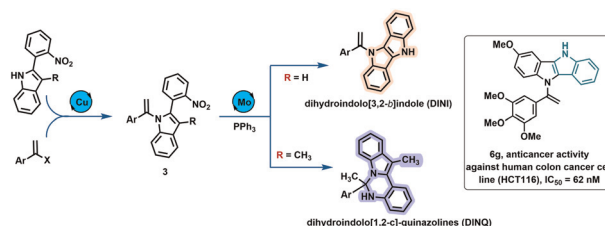
Fundamental questions
Elemental answers

RESEARCH ARTICLES

1668

Mo-catalyzed cyclization of *N*-vinylindoles and skatoles: synthesis of dihydroindolo[1,2-*c*]-quinazolines and dihydroindolo[3,2-*b*]-indoles, and evaluation of their anticancer activities

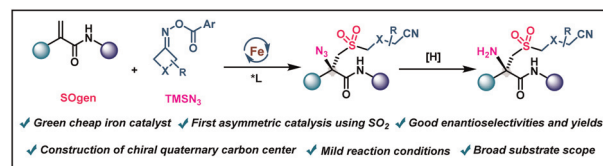
Shannon Pecnard, Xinya Liu, Olivier Provot,*
Pascal Retailleau, Christine Tran* and Abdallah Hamze*



1678

Access to chiral β -amino sulfones from acrylamides and sulfur dioxide by iron catalysis

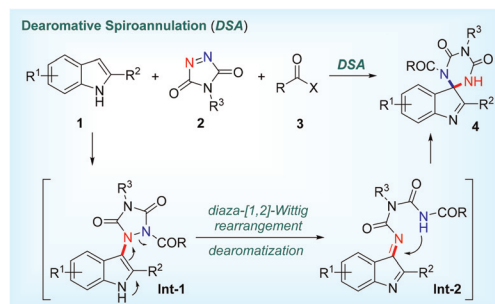
Liping Luo, Xuemei Zhang, Chunxi Huang and
Zhong Lian*



1685

Dearomative spiroannulation of indoles enabled by the diaza-[1,2]-Wittig rearrangement

Can Luo, Chun-Yan Guan, Zhen-Yu Li, Beiling Gao* and
Guang-Jian Mei*



1692

Koilodenoids A–G, immunosuppressive spiro dimers of diterpenoids from *Koilocarpus hainanense*: structural elucidation and biomimetic transformation

Yu Ren, Cheng-Yu Zheng, Jia-Ying Yao, Shi-Jun He,*
Yao-Yue Fan* and Jian-Min Yue*



up to 65% yield
 up to >20:1 dr, up to >99:1 er

Adam Cieśliński, Anna Skrzyńska, Artur Przydacz and Łukasz Albrecht*

Figure 1. Workflow for the identification of the chemical structure of the compound. The process starts with the plant *Puicea indica* and the fungus *Didymella* sp. These lead to the GNPS Molecular networks database. The workflow then shows the identification of the compound as a tricyclic sesquiterpene, specifically a bicyclic sesquiterpene, with a chemical structure diagram and a molecular formula $C_{15}H_{24}O_2$.

Yan Chen, Wencong Yang, Ge Zhu, Guisheng Wang,
Tao Chen, Hang Li, Jie Yuan* and Zhigang She*

up to 93% yield
 mostly > 20:1 dr, > 99% ee

Zhiying Li, Zhenhong Wu, Huan Gong, Xinyi Xu,
Jianfeng Xu* and Xingkuan Chen*

R^1-C#CC1=CC=C(C=C1)NCS + AgF $\xrightarrow{[Rh]}$ R^1-C#CC1=CC=C(C=C1)N(C(F)(F)F)

R^1-C#CC1=CC=C(C=C1)N + AgSCF3 + KI + AgF $\xrightarrow{[Cu]}$ R^1-C#CC1=CC=C(C=C1)N(C(F)(F)F)

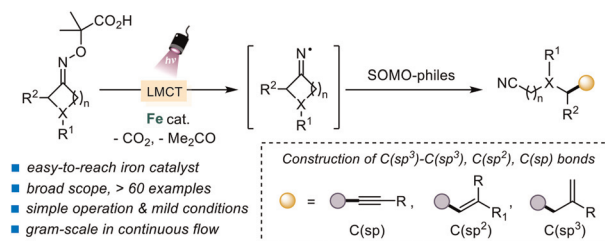
Cascade *N*-trifluoromethylation/cyclization ■ Operational simplicity & readily available reagents
 Mild conditions & broad substrate scope ■ Efficient construction of *N*-trifluoromethylation indoles

Jianquan Hong,* Chongbin Wei, Ruilong Feng,
Kui Zhao, Yi Zhu, Chunxiang Li, Xifei Chen, Xinxin Gong,
Dejing Yin and Changge Zheng*

1729

Iron-catalyzed fragmentation-alkynylation, -alkenylation and -alkylation cascade enabled by photoinduced ligand-to-metal charge transfer

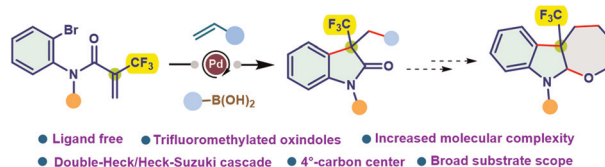
Yining Zhu, Han Gao, Jia-Lin Tu, Chao Yang, Lin Guo,
Yating Zhao* and Wujiong Xia*



1736

Pd-catalyzed double Heck and Heck–Suzuki cascade reaction of *N*-(*o*-bromo aryl) CF₃-acrylamides

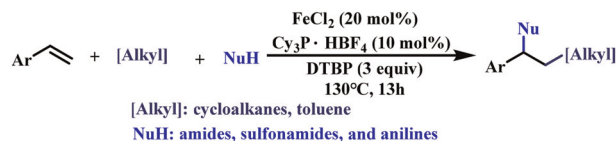
Ruchi Sharma, Naveen Sihag, Hemaang Bhartiya,
Shivangi Saini, Ashish Kumar and M. Ramu Yadav*



1742

Iron-catalyzed carboamination of vinylarenes with alkanes and nitrogen nucleophiles

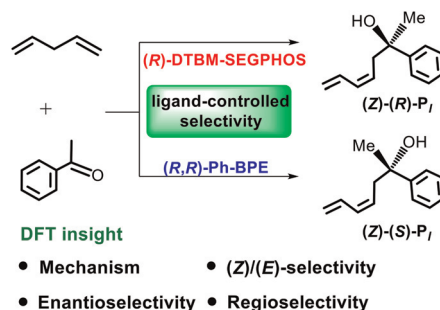
Fengxiang Zhu* and Jianxin Xue



1748

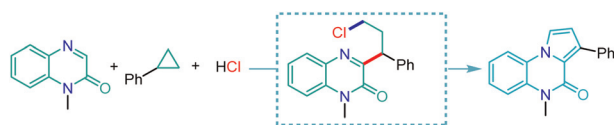
DFT investigation of Cu(I)-catalyzed addition of 1,4-pentadiene to acetophenone: mechanism and selectivity for the synthesis of a chiral tertiary alcohol with a 1,3-diene unit

Jihong Xu, Yiyang Yang, Chengbu Liu and Dongju Zhang*



RESEARCH ARTICLES

1758

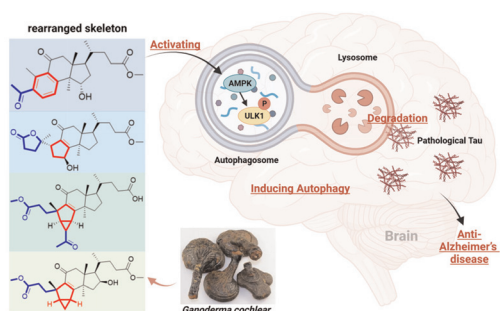


- Metal-free and recyclable catalytic system
- Ring-opening of aryl cyclopropanes
- Unexpected cyclization of quinoxalinones
- 51 Examples with moderate-to-good yields

Visible light-mediated ring opening and cyclization of aryl cyclopropanes: efficient synthesis of pyrrolo [1,2-a]quinoxalin-4(5H)-ones with antineoplastic activity

Jiabin Shen,* Yong Yang, Chao Chen,* Hao Xu, Chao Shen and Pengfei Zhang

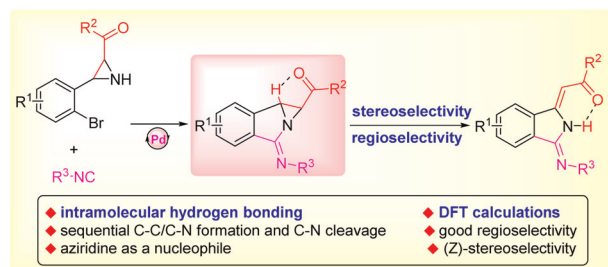
1765



Novel A-seco-nortriterpenoids from *Ganoderma cochlear* inhibiting Tau pathology by activating AMPK-ULK1-mediated autophagy

Rong-Can Luo, Yi Luo, Da-Shuang Fang, Yong-Gang Yao, Ming-Hua Qiu* and Xing-Rong Peng*

1775



Hydrogen bond-promoted regio- and stereoselective synthesis of isoindoline derivatives through Pd-catalyzed isocyanide insertion reaction involving aziridines

Shuang Zheng, Hao-Jie Fan, Shan-Shan Liu, Yang Xu, Zhi-Wen Zhao, Han-Han Kong, Ping He,* Long Wang* and Zhi-Lin Ren*

1782



Organocatalyzed diastereoselective cyclization of β -alkyl nitroolefins with alkylidene malononitriles: new approach to azetidine nitrones and isoxazoles

Shikha S. Rathor, Ashvani K. Patel and Sampak Samanta*

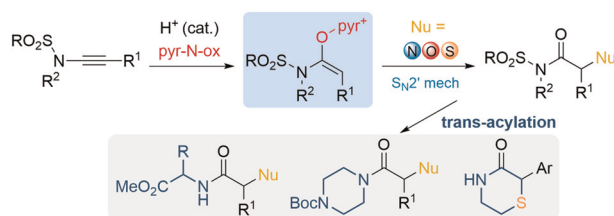


RESEARCH ARTICLES

1790

Synthesis of α -heterofunctionalized carbonyl compounds via Brønsted acid-catalyzed oxygenative coupling of ynamides

Tae-Woong Um, Hyun-Suk Yeom and Seunghoon Shin*

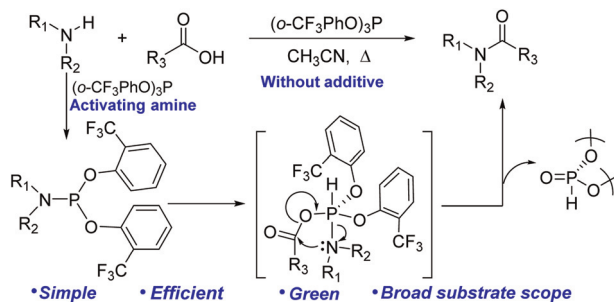


- » Synthesis of α -O, S, N-substituted carbonyls (alcohols, thiols & hydrazides)
- » Imide products readily undergo trans-acylation
- » *Umpolung approach*: unmodified heteronucleophiles can be used

1796

(*o*-CF₃PhO)₃P as a simple coupling reagent for direct amidation via activation of amines

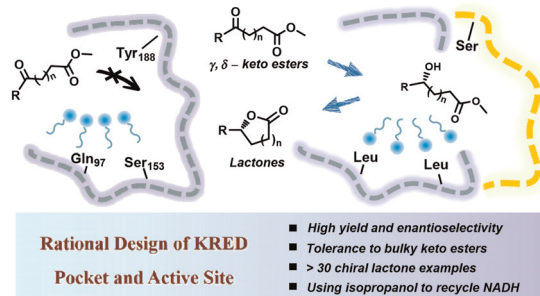
Lin Zhang,* Nana Ma, Mei Wang, Wenchang Gou, Jie Tian, Qian Xu, Chong Zhao and Chun Li*



1804

Efficient stereoselective synthesis of aryl lactones using engineered ketoreductase ChKRED20 from *Chryseobacterium* sp. CA49

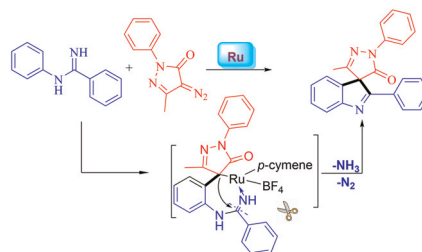
Mingliang Shi, Rude Lin, Yuan Yu, Yao Yao, Xinyue Fan, Kun Li, Zhongliu Wu, Xiaoqi Yu, Yan Liu* and Na Wang*



1811

Ru(II)-catalyzed regioselective [4 + 1] redox-neutral spirocyclization of aryl amidines with diazopyrazolones: direct access to spiro[indole-3,4'-pyrazol]-5'-ones

Bo Cui, Jian Shen, Yadong Feng, Shenghui Lin* and Xiuling Cui*

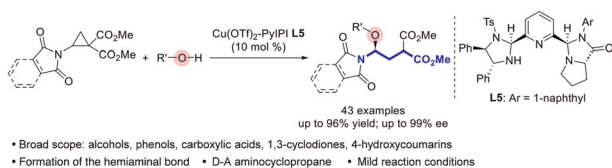


- Excellent regioselectivity and functional group tolerance
- Only by-products are amine and nitrogen
- No external oxidants



RESEARCH ARTICLES

1817

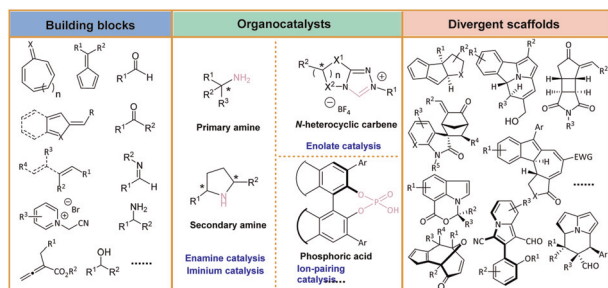


Catalytic asymmetric ring-opening of aminocyclopropanes with oxygen nucleophiles: access to chiral γ -amino acid derivatives

Ru-Lin Luo, Xiao-Bing Wang, Ming-Sheng Xie* and Hai-Ming Guo*

REVIEWS

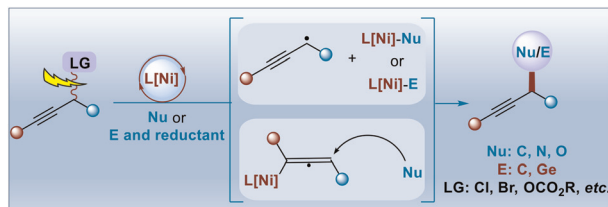
1824



Recent advances in metal-free catalytic enantioselective higher-order cycloadditions

Bei Zhang and Jian Wang*

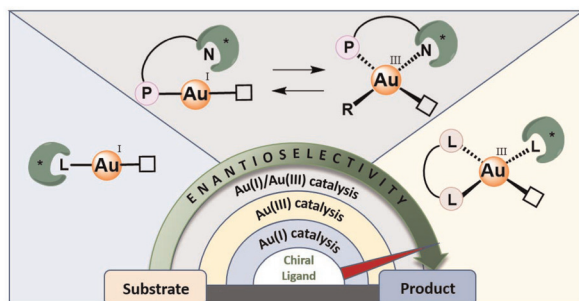
1843



Recent advances in nickel-catalyzed propargylic substitution

Feifei Tong, Dandan Hu, Chun Zhang, Jun-Qi Zhang* and Hongjun Ren*

1858



Asymmetric gold catalysis enabled by specially designed ligands

Amol B. Gade,* Urvashi and Nitin T. Patil*

