

IN THIS ISSUE

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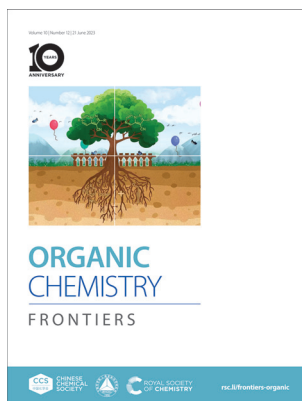


Cover

See Nikolai Brodt and Jochen Niemeyer, pp. 3080–3109.

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We would like to thank Mrs. Dana Kauerhof for creating the cover artwork.



Inside cover

See Hua Cao, Xiang Liu *et al.*, pp. 2892–2897.

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RESEARCH ARTICLES

2892

One-step synthesis of cyanated pyrazolo[1,5-a]pyridines utilizing *N*-aminopyridines as a 1,3-dipole and a nitrogen source

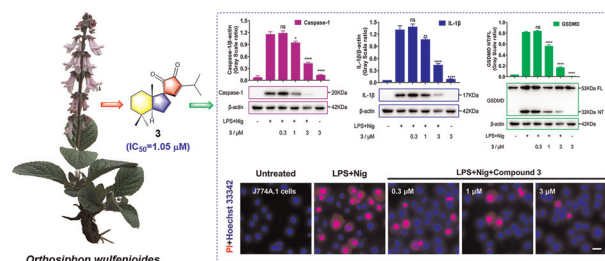
Xiaotian Shi, Yu Lin, Jiaohang Wei, Limin Zhao, Pengfeng Guo, Hua Cao* and Xiang Liu*



2898

Diterpenoids with a novel 6/5-5 spiro tricyclic skeleton from *Orthosiphon wulfenoides* and their NLRP3 inflammasome inhibitory activity

Wen-Chao Tu, Xing-Jie Zhang, Ying-Xin Zhao, Wei-Chi Chen, Xing-Yu Zhang, Chang-Lin Yang, Muhammad Aurang Zeb, Xiao-Li Li,* Kaunda-Joseph Sakah, Rui-Han Zhang, Mei-Feng Liu* and Wei-Lie Xiao*



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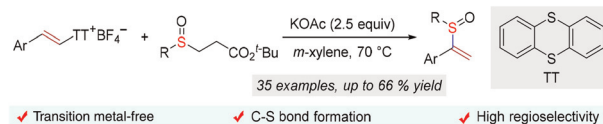


RESEARCH ARTICLES

2907

Transition metal-free and regioselective alkenyl C–S cross-coupling reaction of alkenylsulfonium salts

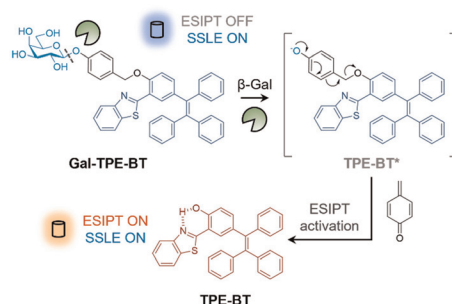
Qiang Wang, Shuaijie Wu, Yi-Dong Wang,* Jing Sun, Ying Han,* Chao-Guo Yan and Lei Wang*



2913

Ratiometric sensing of β -galactosidase based on excited-state intramolecular proton transfer (ESIPT) and solid-state luminescence enhancement

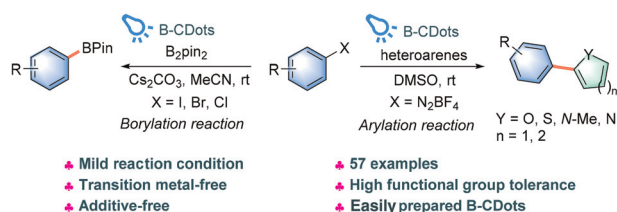
He Tian, Jr., Wei Lin, Xi-Le Hu, Jing-Bo Wang, Min-Yu Zhang, Yi Zang, Xin-Yan Wu, Jia Li,* Tony D. James* and Xiao-Peng He*



2918

Visible light-induced borylation and arylation of small organic molecules using carbon dots

Tiantong He, Heping Wei, Yuanbo Zhou, Li-ya Jiang, Jonathan B. Baell, Yang Yu* and Fei Huang*

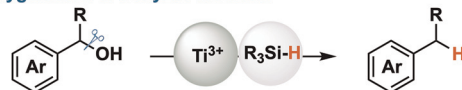


2927

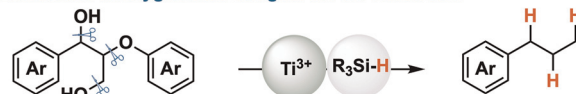
Titanium-catalysed deoxygenation of benzylic alcohols and lignin model compounds

Alexandru Căciuleanu, Felix Vöhringer and Ivana Fleischer*

Deoxygenation of benzylic alcohols



Exhaustive deoxygenation of lignin model substrates

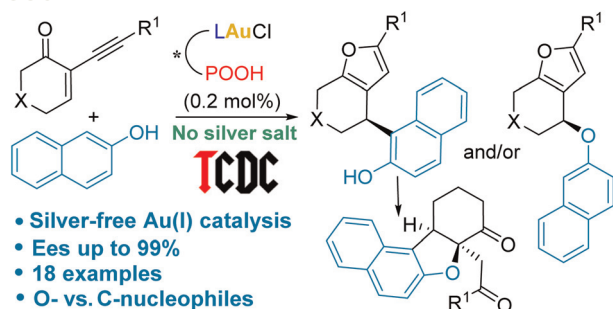


- ✓ sustainable 3d-metal catalyst
- ✓ silane as H-donor and activator
- ✓ functional group tolerance
- ✓ reusable side products



RESEARCH ARTICLES

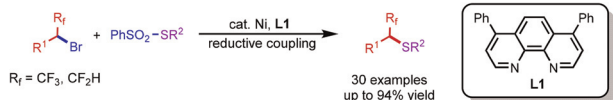
2936



Enantioselective Au(I)-catalyzed tandem reactions between 2-alkynyl enones and naphthols by the tethered counterion-directed catalysis strategy

Yunliang Yu, Nazarii Sabat, Meriem Daghmoum, Zhenhao Zhang, Pascal Retailleau, Gilles Frison,* Angela Marinetti* and Xavier Guinchard*

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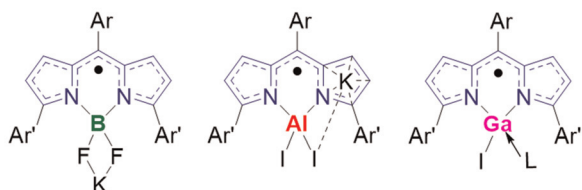


Synthesis of trifluoromethylated thioethers via Ni-catalyzed reductive C-S coupling

Wei Liu, Yan He, Zhi-Yuan Liu, Yanlin Li, Yan Li, Bing-Bing Wu, Ruo-Xin Jin and Xi-Sheng Wang*

2949

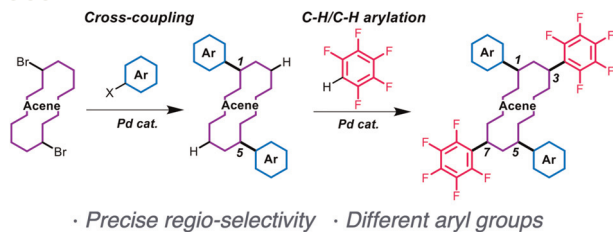
Crystalline radicals derived from BODIPY and its heavier analogues



Crystalline radicals derived from boron-dipyrromethene and its heavier analogues

Xinxin Wang, Zhuofeng Xie, Yuyang Dai, Xiaona Liu, Manling Bao, Chen Liu, Qiqi Han, Chunmeng Liu* and Yuanting Su*

2955



Straightforward and regioselective synthesis of 1,3,5,7-tetra-arylated acene bearing different aryl groups

Ryota Sato, Kunfeng Chen, Takeshi Yasuda, Takaki Kanbara* and Junpei Kuwabara*

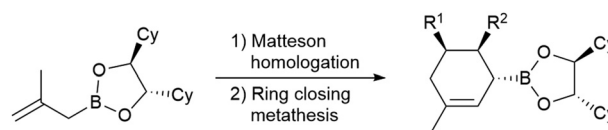


RESEARCH ARTICLES

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Stereoselective synthesis of five- and six-membered carbocycles via Matteson homologation/ring closing metathesis

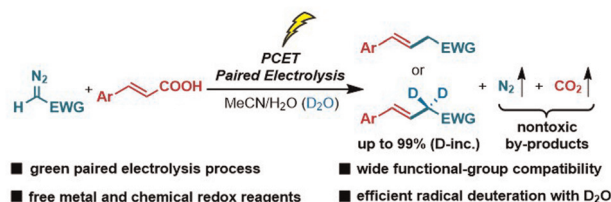
Thorsten Kinsinger and Uli Kazmaier*



2968

Paired electrolysis enables decarboxylative coupling of alkenyl acids with diazo compounds

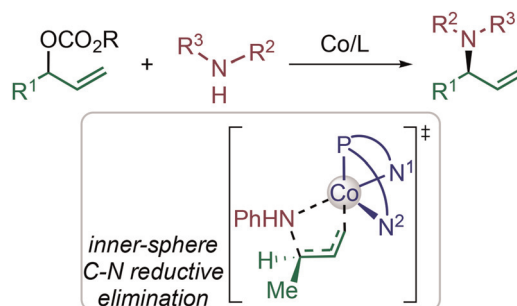
Jingchao Jiao, Yapeng Yan, Qiumin Ke, Yusen Zhang, Hang Huang, Qianwen Gao, Jie Liu* and Xi Wang*



2976

A computational study on cobalt-catalyzed allylic substitution of racemic allylic carbonates with amines: inner-sphere C–N reductive elimination and origins of regio- and enantioselectivities

Zhen Shen, Hongli Wu, Jinjin Yang, Deping Kong, Jiaao Ge and Genping Huang*



2988

Chemo- and regioselective cyclization of diene-tethered enynes via palladium-catalyzed aminomethylamination

Renren Li, Haocheng Zhang, Bangkui Yu* and Hanmin Huang*



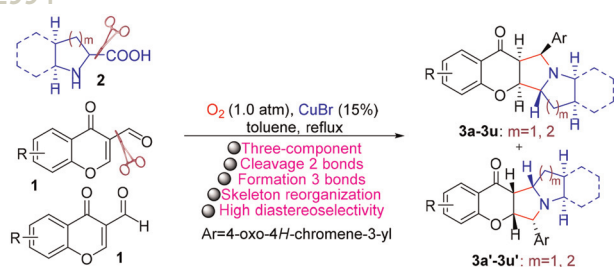
✓ high atom economy

✓ Excellent chemo- and regioselectivities



RESEARCH ARTICLES

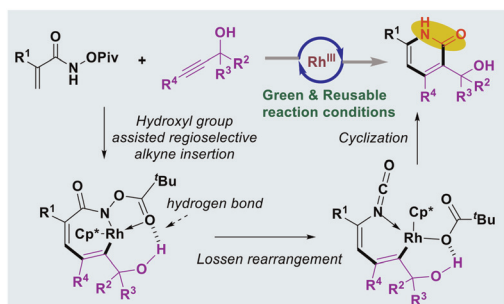
2994



Cu-catalyzed decarboxylative annulation of proline derivatives: multi-component synthesis of functionalized chromeno[2,3-c]-pyrrol-9(1H)-one derivatives

Li Chen, Jin-Mei Qi, Shu Yang, Si-Nuo Sun and Sheng-Jiao Yan*

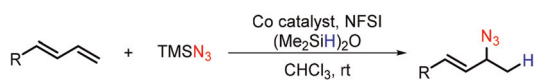
3000



Rhodium-catalyzed regioselective C–H activation/Lossen rearrangement/annulation for the green synthesis of trisubstituted 2-pyridones

Yidi Li, Huiying Xu, Lin Huang, Zhi Zhou,* Zhenhao Tang, Haifang Meng, Wei Zhang, Wei Yi* and Xiaowei Wu*

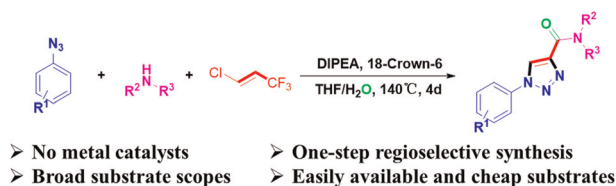
3010



Cobalt-catalyzed regioselective hydroazidation of 1-aryl-1,3-dienes: facile access to allylic azides

Mei-Hua Shen, Xiao-Wen Qi, De-Xia Li, Xin-Yi Wang, Chi-Fan Zhu* and Hua-Dong Xu*

3016



Metal-free 1,3-dipolar cyclization of azides with HFO-1233zd(E) in the presence of amines: one-step regioselective synthesis of 1-N-substituted 1,2,3-triazole-4-carboxamide derivatives

Jing Wang, Qian Yu, Zheng Wang, Zheteng Zhang, Linghui Zeng, Chong Zhang, Huajian Zhu,* Jiaan Shao* and Jiankang Zhang*

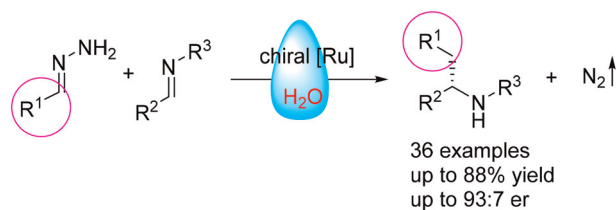


RESEARCH ARTICLES

3021

Asymmetric addition of hydrazones as alkyl carbanion equivalents with aryl imines in water

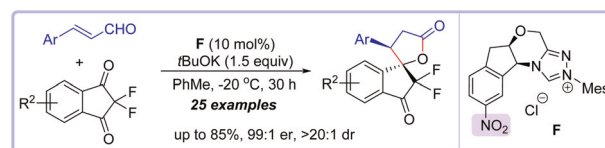
Yi-Zhan Wang, Shao-Dong Liu, Liang Cheng, Li Liu* and Chao-Jun Li*



3027

N-heterocyclic carbene-catalyzed enantioselective synthesis of spirocyclic ketones bearing *gem*-difluoromethylenes

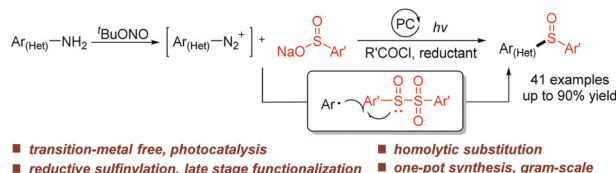
Zheng Liang, Jibin Li, Chaolei Liu, Yiwei Zhu* and Ding Du*



3033

A reductive Sandmeyer-type reaction for the synthesis of sulfoxides from anilines under photocatalysis

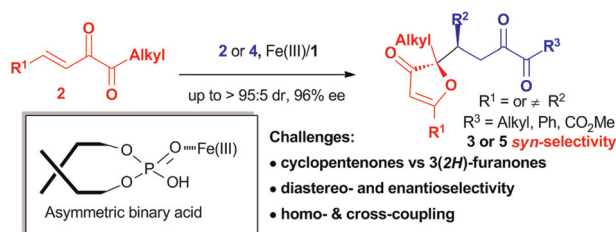
Gangqi Peng, Hao Cheng, Xiya Cheng, Yang He, Yuanyuan An,* Jie Wu* and Danqing Zheng*



3039

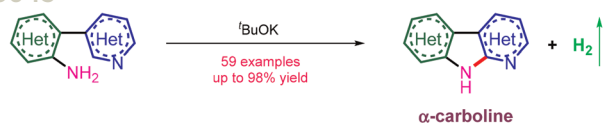
Asymmetric binary-acid catalysis: a diastereo- and enantioselective oxa-Nazarov cyclization-Michael addition of conjugated 1,2-diketones

Yuan Tian, Mengdie Tang, Changshuo Lian, Ran Song, Daoshan Yang and Jian Lv*



RESEARCH ARTICLES

3045

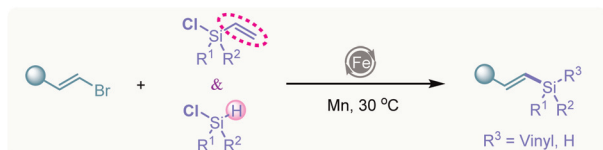


- Transition metal-free
- H₂ as the sole by-product
- Intramolecular Chichibabin-type amidation with weak nucleophilic anilines
- Atom- and step-economy
- Without pre-functionalization

Metal-free heteroarene C(sp²)-H amination with unprotected (hetero)arylamines

Tao Wen, Zhen Zhang,* Lihua Ye, Chihong Zhang, Bo Jin, Wenkun Wang, Zhong-Ning Chen and Hu Cai*

3052



- ★ ~60 examples, up to 99% yield
- ★ simple and mild conditions
- ★ excellent functional group tolerance
- ★ modifications and synthetic applications

Iron-catalyzed cross-electrophile coupling of bromostyrenes and chlorosilanes

Ying Lin, Liang Zou, Renren Bai, Xiang-Yang Ye,* Tian Xie* and Yang Ye*

3061



- Dual nickel/photoredox catalysis.
- Modular and facile protocol.
- Good functional group compatibility.
- Readily available starting materials

Cross-coupling of aldehydes and α -bromophosphonates to modularly access α -substituted- β -ketophosphonates under dual nickel/photoredox catalysis

Xinxuan Li, Hepan Wang and Tao XU*

3067

Intramolecular alkene hydroacylation with methyl ester as acyl electrophile



- > 40 examples, up to 94 %
- Good functional group tolerance
- Easy post-synthetic modification
- Total synthesis and LSF of pharmaceuticals
- Excellent free radical scavenging activities

Expedient assembly of densely functionalized indanones via nickel-catalyzed alkene hydroacylation with methyl esters

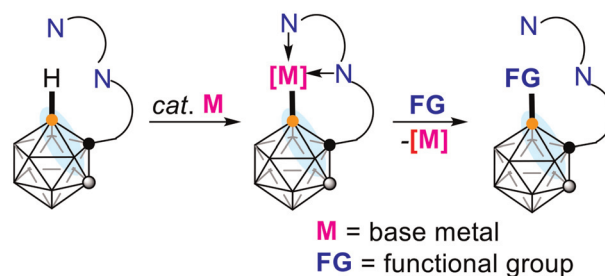
Min Zeng, Fuli Huang, Minghui Zhu, Jichao Ding, Tong Qin, Maoting Xu, Wanqing Liu, Jun Lu, Jicheng Wu,* Xurong Qin* and Qiao Ren*



3074

A strategy for regioselective B–H functionalization of o-carboranes via base metal catalysis

Jie Zhang and Zuowei Xie*



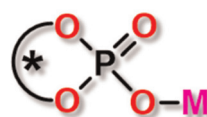
REVIEWS

3080

Chiral organophosphates as ligands in asymmetric metal catalysis

Nikolai Brodt and Jochen Niemeyer*

Asymmetric catalysis with metal-phosphates

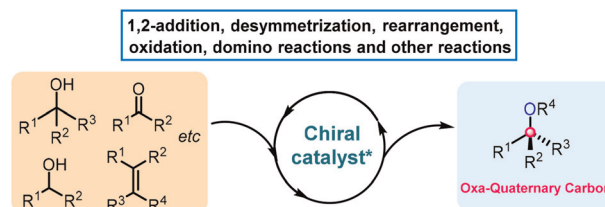


M = Li, Mg, Ca, In, Bi,
Ti, Mn, Rh, Pd, Ag, Au,
Yb

3110

Recent advances in the asymmetric catalytic construction of oxa-quaternary carbon centers

Yu-Ping He, Di Tian, Xing-Zi Li and Hua Wu*



3130

Progress in catalytic asymmetric α -functionalization of vinylogous nucleophilic species

Zhen-Hua Wang,* Yong You, Jian-Qiang Zhao, Yan-Ping Zhang, Jun-Qing Yin and Wei-Cheng Yuan*

