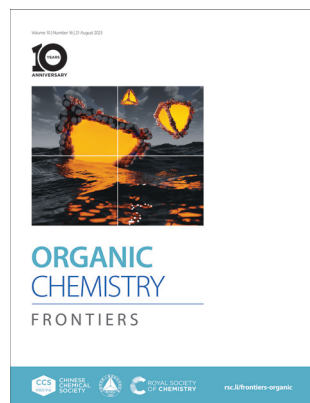


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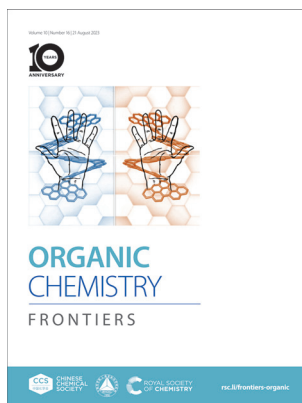
ISSN 2052-4129 CODEN OCFRA8 10(16) 3953–4212 (2023)



Cover

See Severin T. Schneebeli *et al.*, pp. 3965–3974.

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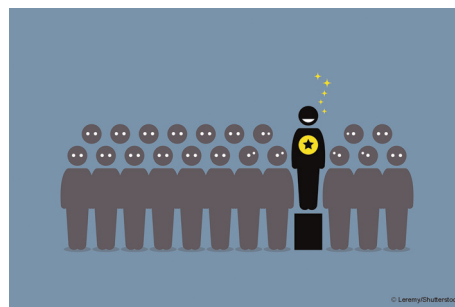
See Wesley A. Chalifoux *et al.*, pp. 4167–4197.

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EDITORIAL

3964

Outstanding Reviewers for *Organic Chemistry Frontiers* in 2022

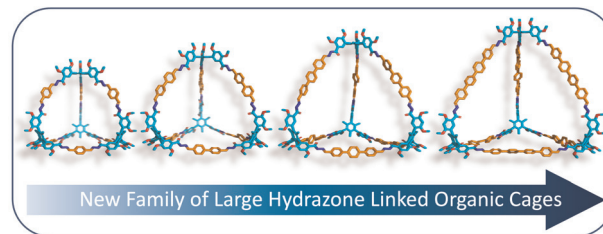


RESEARCH ARTICLES

3965

Efficient multigram procedure for the synthesis of large hydrazone-linked molecular cages

Olav Vestrheim, Mica E. Schenkelberg, Qingsheng Dai and Severin T. Schneebeli*



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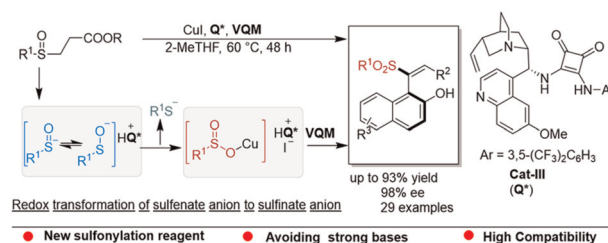


RESEARCH ARTICLES

3975

Redox transformation of β -sulfinyl esters for asymmetric synthesis of sulfone-based axially chiral styrenes

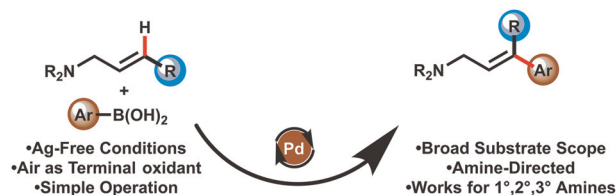
Shiyu Xiang, Taotao Lu, Junjun Liu and Qingyang Zhao*



3982

Oxidative Mizoroki–Heck reaction of unprotected cinnamylamines at ambient temperature under air

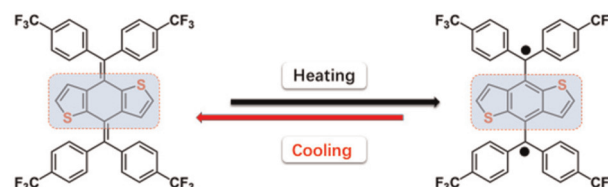
Olutayo N. Farinde, Vanaparthi Satheesh, Kendra K. Shrestha, Carmen R. Rhinehalt, Vinod G. Landge and Michael C. Young*



3989

Thermal-responsive ground-state spin switching in novel butterfly-shaped overcrowded ethylene featuring a benzodithiophene core

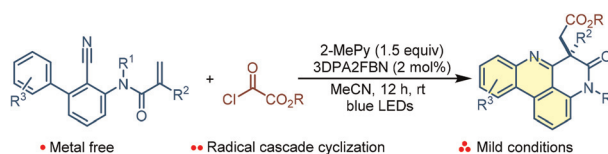
Yi Han, Fei Ying, Enxi Wu, Xiaoxiao Yu, Guangpeng Gao, Jing Xie and Xu-Hui Jin*



3995

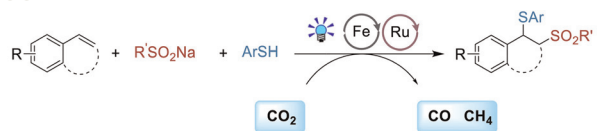
Synthesis of ester-containing phenanthridines via photoredox-catalyzed radical cascade cyclization of *N*-arylacrylamides with alkyloxalyl chlorides

Meiling Chen, Jian-Qiang Chen, Zhengkai Chen* and Jie Wu*



RESEARCH ARTICLES

4002

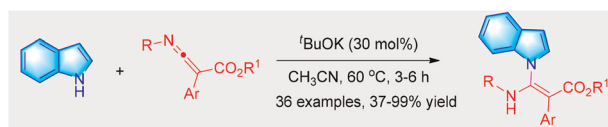


- CO₂ as an oxidant
- CO₂-to-fuel conversion
- 38 examples, up to 95% yield
- Without extra stoichiometric reductant
- CO and CH₄ released
- Good functional group compatibility

Visible-light-promoted CO₂ oxidative 1,2-thio-sulfonylation of styrenes with sodium sulfinates and thiophenols

Shiwei Xia, Linna Wu, Guizhi Zhai, Zechao Wang* and Junliang Wu*

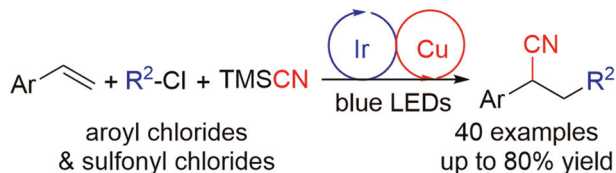
4010



Synthesis of *N*-β-aminoacrylate substituted indoles via ^tBuOK catalyzed addition of indoles to ketenimines

Yan-Qiu Deng, Man-Zhen Gu, Guo-Shu Chen,* Xin-Yu Li, Ying He, Yi-Lin Zheng, Qi-Mei Yang and Yun-Lin Liu*

4016

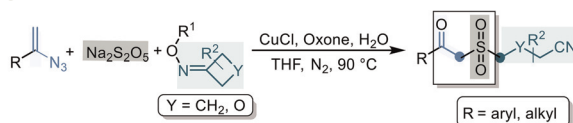


- ◆ Good functional group tolerance
- ◆ Substrates without pre-preparation
- ◆ Applicable to aryl chlorides, aromatic and aliphatic sulfonyl chlorides

Direct acylcyanation of aryl alkenes by dual photoredox and copper catalysis

Chun-Lin Dong, Zhi Guan* and Yan-Hong He*

4023



- Three-component radical cascade reaction
- Involving radical relay, radical addition, hydrogen abstraction, hydrolysis or oxidation
- Using CuCl as the catalyst under mild reaction conditions
- Construction of four new bonds in one-pot

Copper-catalyzed multicomponent cascade synthesis of polyfunctionalized β-ketone sulfones

Chun-Mei Luo, Yong-Bin Sun, Ling-Tao Wang, Nan-Nan Dai, Jiao-Zhe Li, Jianfeng Zhang,* Jin-Yang Chen, Wen-Ting Wei* and Guo-Ping Ge*

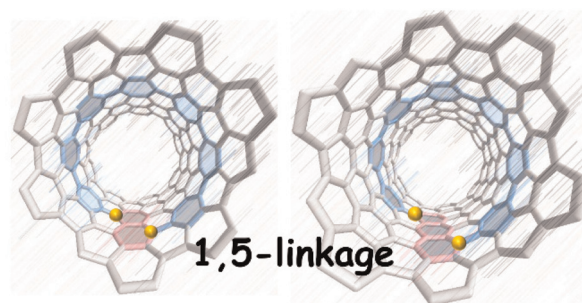


RESEARCH ARTICLES

4030

Synthesis and photophysical properties of helical carbon nanohoops with twisted acene panels

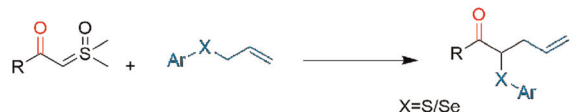
Rui Liu, Hengxin Liu, Can Shi, Yunfei Wang, Zhuping Chu, Tianlu Wu, Yaru Liu, Wen-Mei Wei, Ren-Hui Zheng, Pingwu Du* and Dapeng Lu*



4038

A ruthenium catalyzed Dolye–Kirmse rearrangement reaction of sulfoxonium ylides with sulfides or selenides

Ying-Di Hao, Jiao Liang, Zhi-Qian Lin, Tian-Le Huang, Ya-Di Xu, Li Guo, Zhong-Zhen Yang* and Yong Wu*



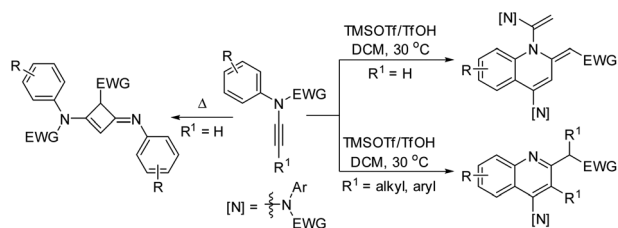
✓ mild conditions ✓ broad substrate scope
✓ easily accessible and stable starting materials

27 examples
up to 91% yield

4043

Metal-free [2 + 2] and [4 + 2] cycloadditions of *N*-aryl-substituted ynamides to construct functionalized aminocyclobutenes and 4-aminoquinolines

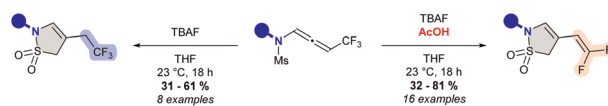
Lixia Ding, Zhifei Zhu, Xinyue Zhou, Gongming Zhu, Jian-Hua Wang, Shu-Tong Zhu, Bing Hu, Xiao-Na Wang* and Junbiao Chang*



4055

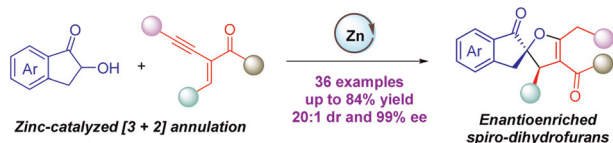
TBAF-promoted carbanion-mediated sulfonamide cyclization of CF₃-substituted *N*-allenamides: an access to fluorinated γ -sultams

Clément Gommenginger, Yongxiang Zheng, Daniele Maccarone, Ilaria Ciofini and Laurence Miesch*



RESEARCH ARTICLES

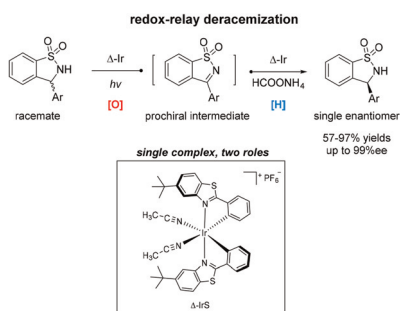
4061



Enantioselective access to spiro[2,3-dihydrofuran-2,2'-inden-1-ones] via zinc catalyzed [3 + 2] annulation of α -hydroxy-1-indanones with yne-enones

Jiao-Jiao Han, Tao Jiang, Cui Zhang, Dan-Dan Cui, Yuan-Zhao Hua,* Guang-Jian Mei, Min-Can Wang* and Shi-Kun Jia*

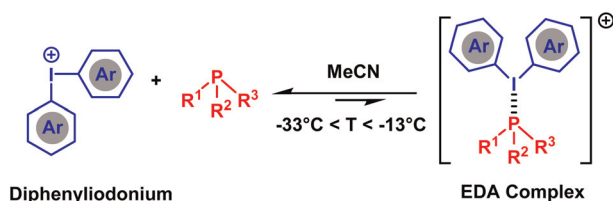
4068



Light-driven redox-relay deracemization of cyclic sulfonamides catalyzed by a chiral-at-metal iridium complex

Yunfei Liu, Junfeng Yang, Linlin Wei, Wenfeng Jiang and Lei Shi*

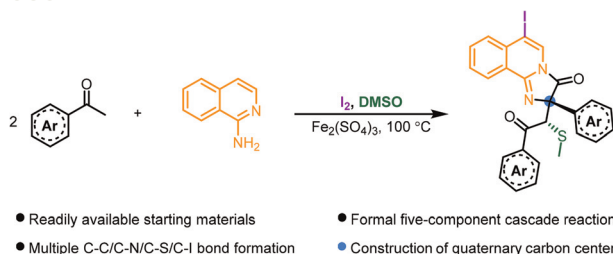
4073



NMR spectroscopy as a unique tool for the quantification of weak interactions between trivalent phosphorus compounds and diphenyliodonium ions

Hend Besrou, Matthieu Hedouin, Lina Truong, Sami Lakhdar* and Hassan Oulyadi*

4080



I_2 -DMSO mediated multicomponent convergent synthesis of imidazo[2,1-a]isoquinoline derivatives via a triple *in situ* cross-trapping strategy

Yong-Xing Tang, Shi-Yi Zhuang, Jin-Yi Liu, You Zhou, Li-Sheng Wang, Yan-Dong Wu and An-Xin Wu*

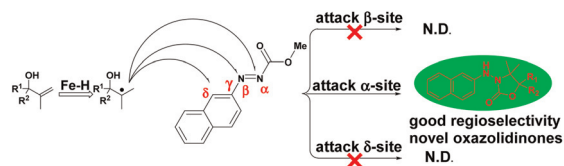


RESEARCH ARTICLES

4086

Synthesis of polysubstituted oxazolidinones via regioselective addition of azonaphthalenes

Fu-Yu Li, Bei Wang, Hong Xu, Yao Xiao, Dong-Wei Huang and Ji-Yu Wang*

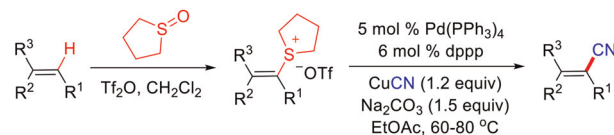


- Regioselective addition of azonaphthalenes
- Multiple membered spiro oxazolidinones
- Construction of oxadiazin-2-one and β -hydroxyhydrazine compounds
- Mild conditions and broad substrate scopes

4092

Site-selective olefinic C–H cyanation via alkenyl sulfonium salts

Juan Ma, Jie Lin, Zilong Huang, Ping Wu, Yong-Gui Zhou* and Zhengkun Yu*

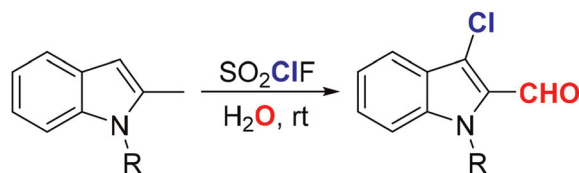


- Bench-stable sulfonium salts
- Broad functional group tolerance
- Up to 99% yields
- High chemo- and regioselectivities

4100

SO₂ClF-promoted chlorination-oxidation of 2-methylindoles: a one-step synthetic method to access 2,3-difunctionalized indoles

Yu Zheng,* Tianting Ma, Bingcong Liu and Shenlin Huang*

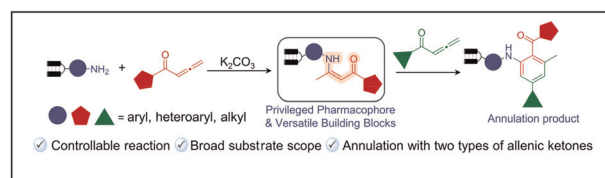


- ✓ Commercially available substrates
- ✓ One-step operation
- ✓ Mild conditions
- ✓ Broad substrate scope

4105

DNA-compatible synthesis of enamminones via amination of allenic ketones

Huihong Wang, Xiaohong Fan, Teng Chen, Yangfeng Li, Gong Zhang,* Wei Fang* and Yizhou Li*

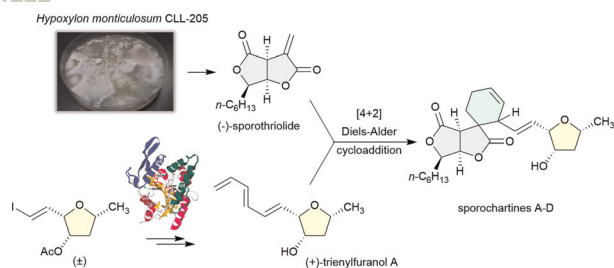


- ✓ Controllable reaction
- ✓ Broad substrate scope
- ✓ Annulation with two types of allenic ketones



RESEARCH ARTICLES

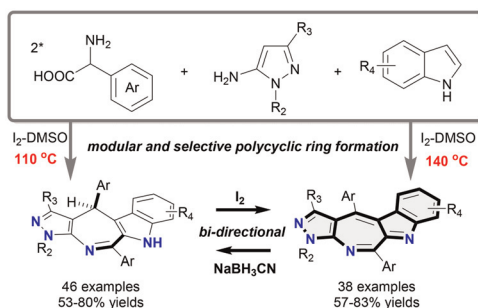
4111



Biomimetic-inspired synthesis of sporochartines through Diels–Alder reaction between enantiopure (–)-sporothriolide and (+)-trienylfuranol A

Guillaume Arcile, Théo Massard, Elsa van Elslande, Jamal Ouazzani* and Jean-François Betzer*

4122



Modular and selective synthesis of pyrazolo-azepino-centred polycyclic aromatic and non-aromatic architectures

Ting Chen, Jin-Tian Ma, Xiang-Long Chen, You Zhou, Zhi-Cheng Yu, Shuang-Gui Lei, Yan-Dong Wu, Jia-Chen Xiang* and An-Xin Wu*

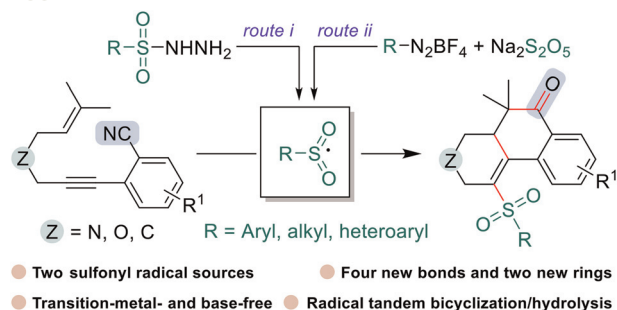
4131



Accessing aryl azides via copper powder-catalyzed cross-coupling of arylboronic acids with the hypervalent azido-iodine reagent ABZ(II)

Zhifang Yang, Feng-Huan Du, Chi Zhang* and Yunfei Du*

4139



Sulfonyl radical-triggered two/three-component tandem bicyclization of CN-containing 1,6-enynes under transition metal- and base-free conditions

Hui Qiu, Liu-Bin Li, Xue-Er Cai, Mu-Han Li, Yue-Jiao Lu, Ling-Tao Wang, Keqi Tang,* Hongxin Liu,* Jin-Yang Chen and Wen-Ting Wei*

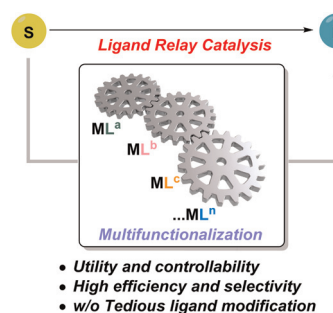


HIGHLIGHT

4146

Ligand relay catalysis: a newly emerged synthetic strategy

Yufeng Sun, Bingcheng Wang and Zhan Lu*

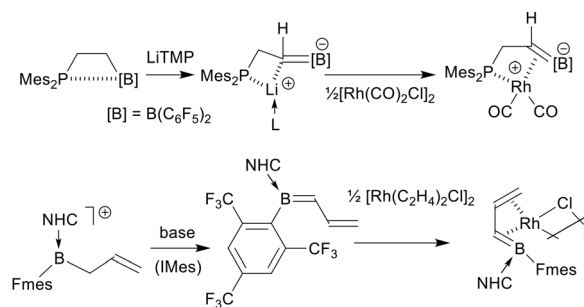


CHEMISTRY FRONTIERS

4161

The B=C bond: some recent developments

Chaohuang Chen, Gerald Kehr and Gerhard Erker*

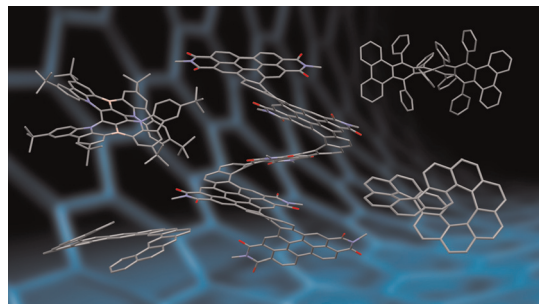


REVIEWS

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New advances in chiral nanographene chemistry

Hannah V. Anderson, Nicolai D. Gois and Wesley A. Chalifoux*



4198

Recent advances in the photocatalytic synthesis of aldehydes

Yi Wang, Xiao-Fei Liu and Wei-Min He*

