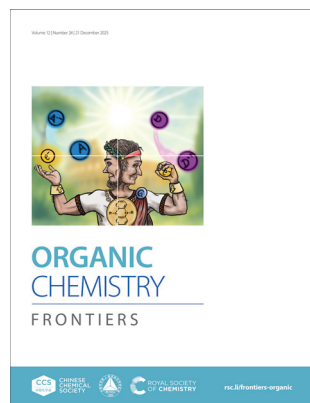


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ISSN 2052-4129 CODEN OCFRA8 12(24) 6783-7190 (2025)



Cover

See Esteban Mejia *et al.*,
pp. 6798–6819.

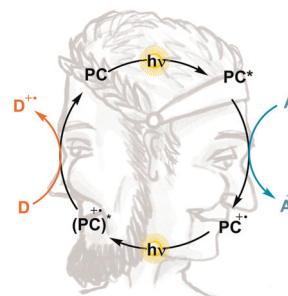
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2025, **12**, 6798.

RESEARCH ARTICLES

6798

Janus-type photo-redox properties and catalytic applications of 5,10-dihydrophenazine derivatives

Phung Phan Huyen Quyen, Nina Hagemeyer,
Thanh Huyen Vuong, Adrian Prudlik, Robert Francke,
Benjamin Dietzek-Ivanšić and Esteban Mejia*

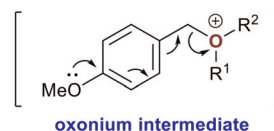
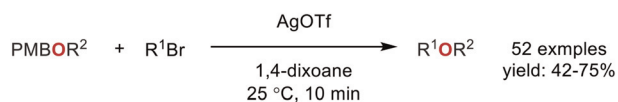


6820

AgOTf-promoted transesterification of *p*-methoxybenzyl ethers with allyl and benzyl bromides

Yufan Yang, Dongyang Jiang, Xuan Li, Juxi Wang,
Lu Gao, Wanshu Wang* and Zhenlei Song*

transesterification via C-O/C-X metathesis



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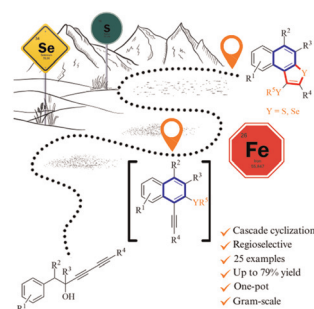
@RSC_Adv

RESEARCH ARTICLES

6826

Regioselective formation of naphtho [2,1-*b*]selenophenes *via* cascade cyclization of 1,3-diynylpropargyl alcohols promoted by iron(III) chloride and diorganyl diselenides

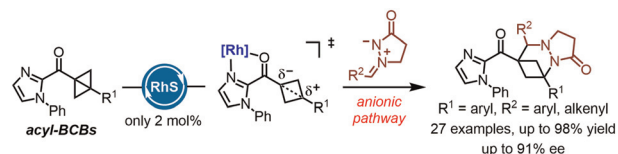
Pedro Pauletto, Davi F. Back, Cristina Wayne Nogueira and Gilson Zeni*



6834

Rhodium-catalyzed cycloaddition of bicyclo[1.1.0]butanes with *N,N'*-cyclic azomethine imines: *en route* to fused diaza-3D scaffolds

Tianlei Du, Qiujie Qin, Jin Li, Yuting Shen, Zixi Wang, Kun Yin,* Xinyao Li,* Jian Li* and Zijun Zhou*

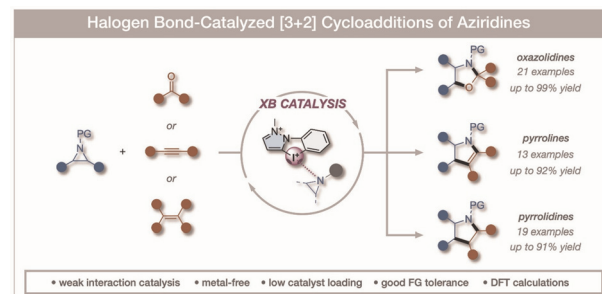


- High efficiency with catalyst loading down to 2 mol% & applicable for asymmetric catalysis
- Access to versatile diazabicyclo[3.1.1]heptanes (bioisosters of substituted pyridines)

6841

Monodentate halogen bond activation of aziridines in formal [3 + 2] cycloadditions

Mattis Damrath and Boris J. Nachtsheim*

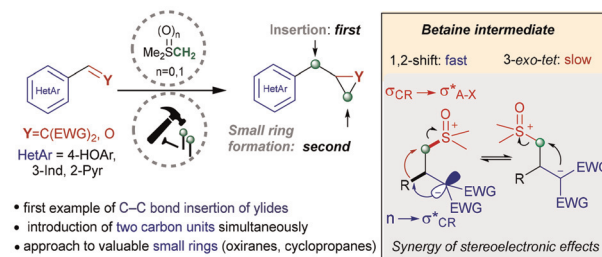


- weak interaction catalysis
- metal-free
- low catalyst loading
- good FG tolerance
- DFT calculations

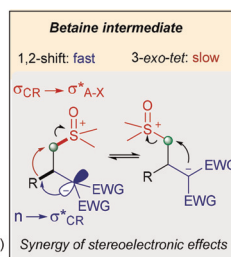
6852

New mode of sulfur ylides reactivity: stereoelectronic control provides C–C bond insertion before cyclopropanation/epoxidation directly affording homologated three-membered rings

Vitaly V. Shorokhov, Beauty K. Chabuka, Albina A. Nikolaeva, Sergey S. Zhokhov, Ivan A. Andreev, Nina K. Ratmanova, Igor V. Trushkov,* Olga A. Ivanova* and Igor V. Alabugin*

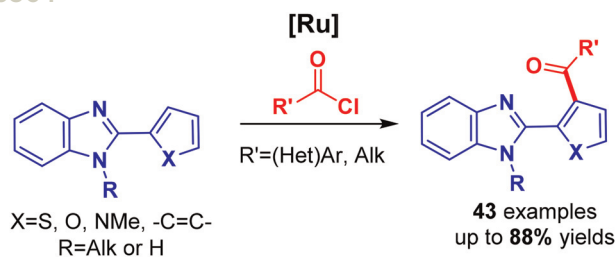


- first example of C–C bond insertion of ylides
- introduction of two carbon units simultaneously
- approach to valuable small rings (oxiranes, cyclopropanes)



RESEARCH ARTICLES

6864

**Facile N-directed Ru-catalyzed C(3)-H acylation of heterocyclopentadienes with acyl chlorides**

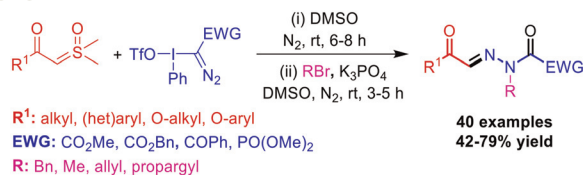
Konstantin E. Shepelenko,* Irina G. Gnatiuk, Andrey A. Aleksandrov, Mikhayl E. Minyaev, Victor M. Chernyshev* and Valentine P. Ananikov*

6873

**Clean and economic synthesis of N-sulfonyl isothioureas from isocyanides, sulfonamides and disulfides**

Changping Xun, Zhibin Nong, Kun Hu, Wenfeng Lv, Jiajun Zhao, Ziqiong Yin, Jialu Lv, Feng Jiang* and Qing-Wen Gui*

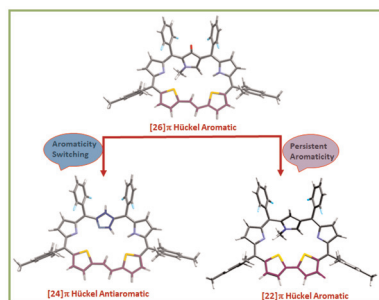
6879

**Nucleophilic addition of sulfoxonium ylides to hypervalent iodine diazo compounds as N-terminal electrophiles: direct access to novel functionalized hydrazones**

Varun Anand, Ruchir Kant and Namrata Rastogi*

Terminal N-electrophilicity of HIDC
Catalyst & additive free
One-pot reaction
Late-stage derivatization of drugs
Wide substrate scope

6885

**Core-modified N-confused pentaphyrin variants with adaptive (anti)aromaticity**

Manik Jana, Gunasekaran Velmurugan, Sumit Sahoo, Peter Comba* and Harapriya Rath*

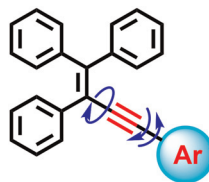


RESEARCH ARTICLES

6894

Alkyne-inserted tetraphenylethylene derivatives: enhanced aggregation-induced emission via intramolecular and intermolecular interactions

Yi-Yun Zhu, Wen-Hao Li, Yan-Qi Fan, Hao-Chen Lu, Donghui Wei* and Xuenian Chen*

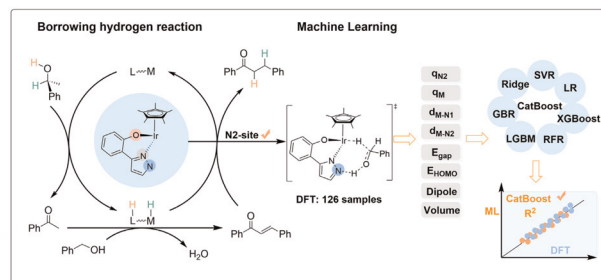


alkyne-inserted strategy
less molecular rigidity
higher quantum yields
rotation oscillation

6902

Mechanistic and machine learning insights into borrowing hydrogen reactions catalyzed by transition metal complexes with N-heterocyclic ligands

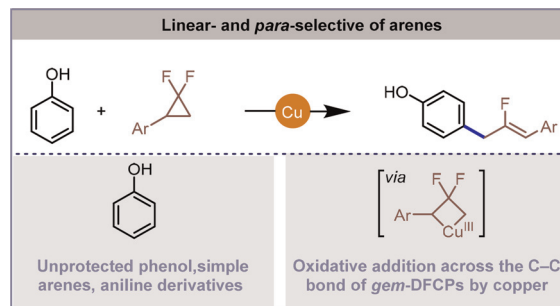
Hui-Qi Mo and Cheng Hou*



6915

Copper-catalyzed HFIP-promoted *para*-selective allylation of phenols via C–C bond activation of *gem*-difluorinated cyclopropanes

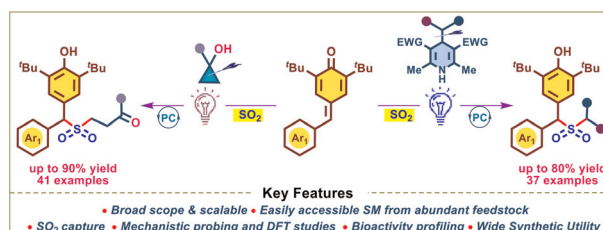
Xu Xu, Yilian Song, Wenhao Xu, Xiaoping Wang, Haitao Chen and Yingsheng Zhao*



6922

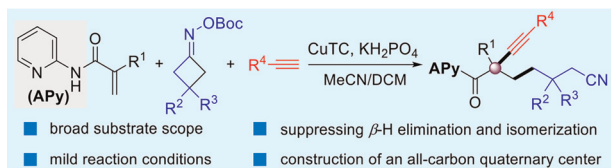
1,6-Hydrosulfonylation of *p*-quinone methides enabled via strain-release-/aromaticity-driven alkyl radical generation and SO₂-capture: synthesis and antiproliferative studies of sulfonylated diarylmethanes

Dipun Kumar Penthi, Tonish Kumar Sahu, Rahimuddin Khan, Shanti Gopal Patra and Tabrez Khan*



RESEARCH ARTICLES

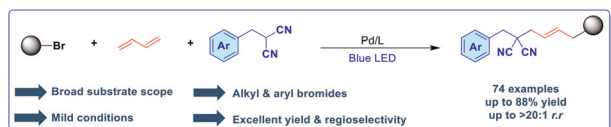
6936



Cu-catalyzed cyanoalkyl-alkynylation of *gem*-disubstituted alkenes to construct all-carbon quaternary center compounds

Yuhang Luo, Xiangxiang Li, Xinjie Zhao, Baomin Yang,*
 Yubo Wei* and Guiping Qin*

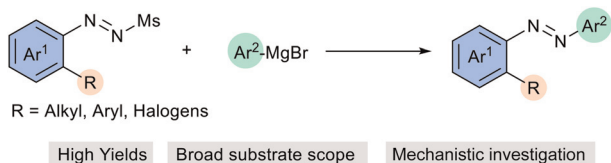
6944



Visiblelight-promoted Pd-catalyzed regioselective 1,4-dicarbonylation of 1,3-butadiene with unactivated bromides and malononitriles

Mostafa Sayed,* Xiao-Yun Ruan, Chenxi Wu and
 Ji-Feng Bai

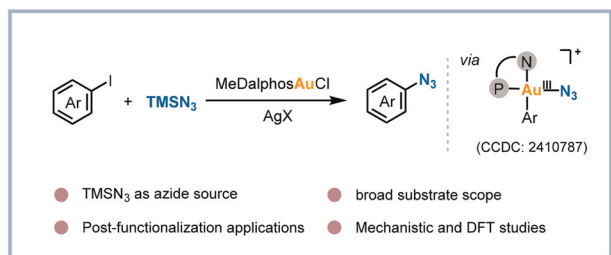
6953



Synthesis of non-symmetric *ortho*-functionalized azoarenes through arylation of arylazo sulfones

Rayhane Hammami, Victor Flon, Morgane Sanselme,
 Julien Legros, Isabelle Chataigner and
 Laëtitia Chausset-Boissarie*

6961



Gold-catalyzed azidation with TMSN₃ and mechanistic studies

Jiawen Wu, Siying Zhao, Xiu-tian-feng E,*
 Junfeng Wang* and Zhonghua Xia*

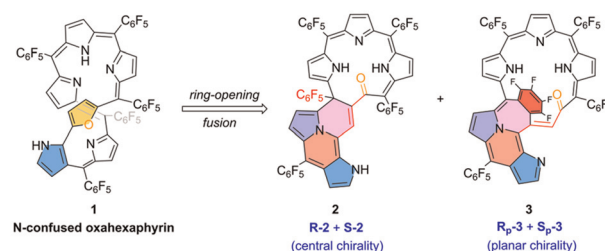


RESEARCH ARTICLES

6966

N-confused oxahexaphyrin: oxidative furan ring-opening and fusion triggered chirality

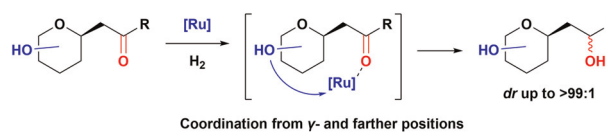
Gaojie Zhu, Zimei Ma, Che Yang, Feng Sha, Glib Baryshnikov, Bin Zhu, Mingbo Zhou, Chengjie Li, Hans Ågren, Jianxin Song, Shijun Li, Qizhao Li* and Yongshu Xie*



6974

Ru-Diphosphine catalyzed asymmetric hydrogenation of unprotected β -C-glycosidic ketones

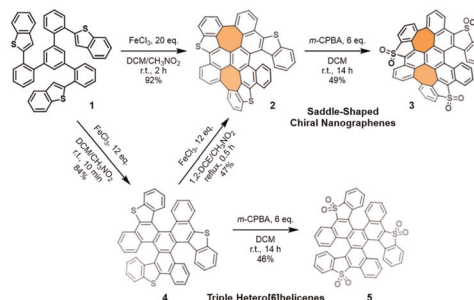
Limin Xu, Yuxuan Zhang, Yan Lu* and Zhaoguo Zhang*



6980

Saddle-shaped chiral nanographenes embedded with diplediadiene and thia[6]helicene units

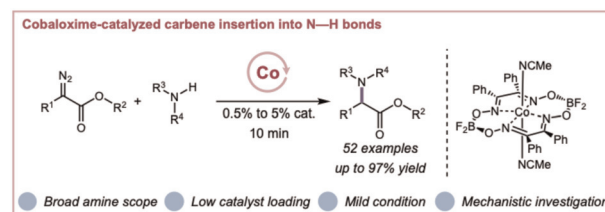
Yufei Xia, Wang Sun, Qiao Yang, Li Jiang, Ying Wang, Yunbin Hu* and Fengkun Chen*



6989

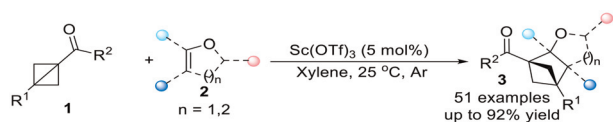
Cobaloxime catalyzed carbene insertion into N–H bonds: a streamlined route to α -amino esters with mechanistic insights

Keyang Wu, Kirklín L. McWhorter, Ayzia Ford, Liming Tan, Lidia M. Waidmann, Jesus O. Vazquez Hernandez, Madeline M. Garcia, Katherine M. Davis* and Gang Li*



RESEARCH ARTICLES

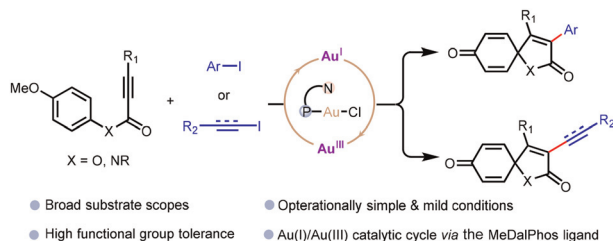
7003



Lewis acid-mediated intermolecular $[2\pi + 2\sigma]$ cycloaddition between enol ethers and bicyclo[1.1.0]butanes

Shijie Zhu, Yukun Meng, Zhifei Zhao and Shi-Wu Li*

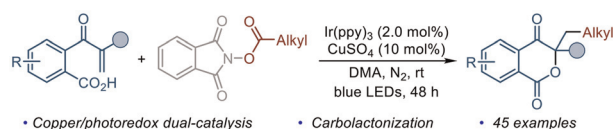
7010



Gold-catalyzed spirocyclization of activated alkynes with organiodides: access to 3-arylated, 3-alkenylated, and 3-alkynylated spiro[4.5]trienones

Jianyue Bi, Zhenxing Zhang, Yuanhao He, Huajian Li, Xinming Yan, Fen Zhao,* Fang Dai* and Baomin Fan*

7019



Synthesis of 3,3-dialkyl-substituted isochroman-1,4-diones via copper/photoredox dual-catalyzed carbolactonization of alkenes

Pengfei Zhou, Ziyu Jin, Qiuping Ding,* Jian-Qiang Chen* and Jie Wu*

7026



Transition metal-free transfer hydrogenation of aryl azides with alcohols: direct synthesis of secondary amines and N-heterocycles

Jinwoo Lee, Ramachandra Reddy Putta, Junhwa Hong, Seung Hyun Choi, Honghui Lee, Seok Beom Lee and Suckchang Hong*

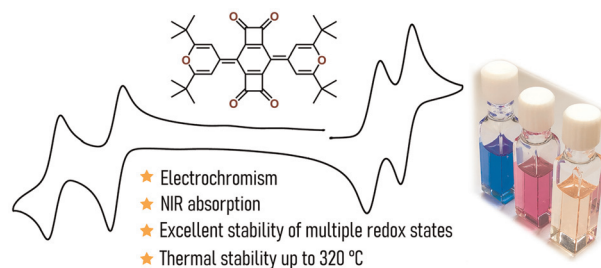


RESEARCH ARTICLES

7035

A novel member of the benzo-annulated oxocarbon family

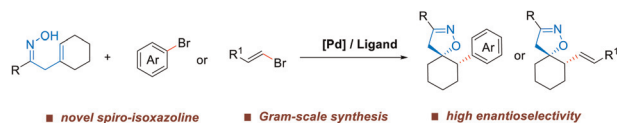
Anna S. Rumyantseva, Konstantin A. Lyssenko and Tatiana V. Magdesieva*



7043

Access to spiro-isoxazolines via a palladium-catalyzed carboetherification of cycloalkenyl-tethered oximes

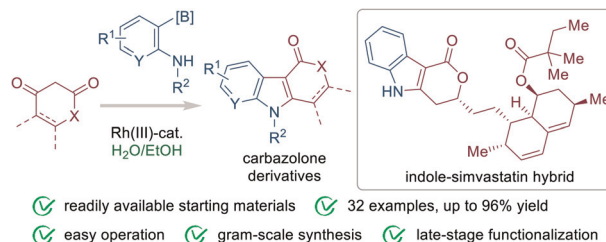
Qicai Ma, Yuanyuan Li, Zhiping Liu,* Chengming Wang* and Wei Zhou*



7049

Rh-catalyzed [3 + 2] cyclization of (hetero)cyclic 1,3-dicarbonyls with 2-aminoarylboronic esters to access carbazolones

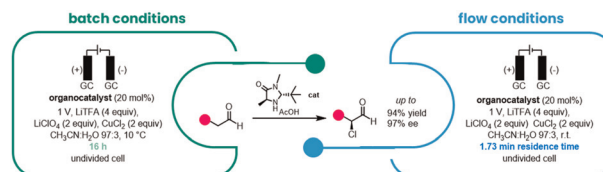
Bei Wan, Ce Liu, Haoyuan Xiong, Yi Deng, Zhonghua Gu, Shaoyu Mai,* Feng Qiu* and Qingfeng Du*



7055

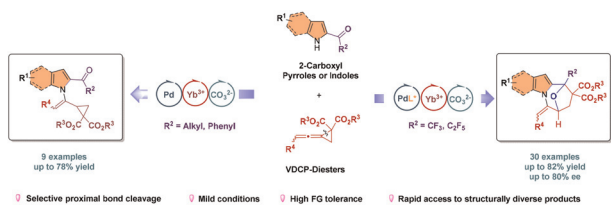
Enantioselective organocatalytic electrochemical α -chlorination of aldehydes

Stefano Andolina, Alessandra Puglisi, Sergio Rossi, Fabrizio Medici and Maurizio Benaglia*



RESEARCH ARTICLES

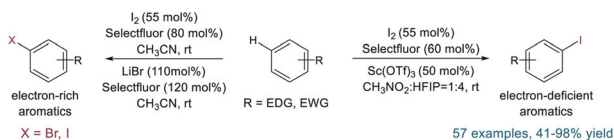
7064



Construction of oxabicyclo[3.2.1]octanes *via* palladium-catalyzed intermolecular [3 + 4] cycloadditions of vinylidenecyclopropane-diester with pyrroles or indoles bearing a trifluoroacetyl group and the related hydroamination reaction

Bo Zhang, Ze-Ren Yang, Yin Wei* and Min Shi*

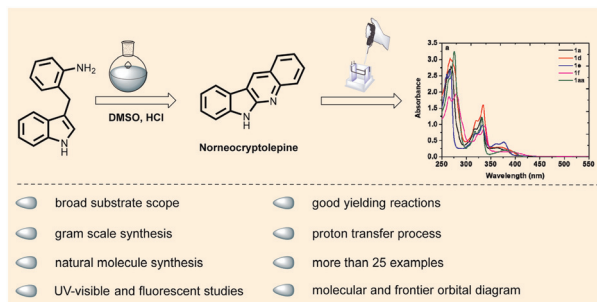
7075



Selectfluor-promoted electrophilic aromatic halogenation: a general strategy for iodination and bromination *via* oxidative halide activation

Fan Wu,* Yuying Weng, Xubing Hu and Feng Ni*

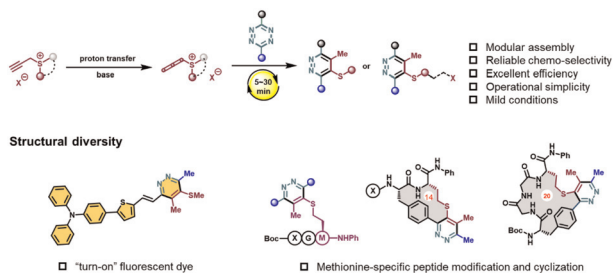
7081



Facile access to indolo[2,3-*b*]quinoline alkaloids *via* DMSO-mediated cascade cyclization: unveiling their photophysical potential

Gokulprasanth Nataraj, Ranjithkumar Chandran, Muniappan Kalipriyadharshini, Diksha Bansal, Easwaramoorthi Shanmugam,* Mrinal Kanti Das* and Saikat Chaudhuri*

7091



An IEDDA reaction of propargyl sulfonium salts and tetrazines: a versatile [4 + 2] modular assembly

Zheng Wang, Qi Zhu, Jiankang Zhang, Huajian Zhu, Jian Shao* and Wenteng Chen*

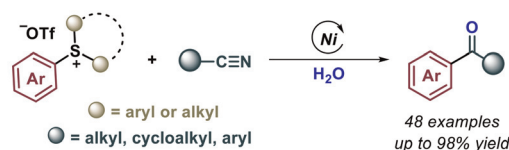


RESEARCH ARTICLES

7097

Nickel-catalyzed synthesis of aryl ketones from arylsulfonium salts and nitriles

Ping Wu, Guan-Sheng Jiao* and Cheng-Pan Zhang*

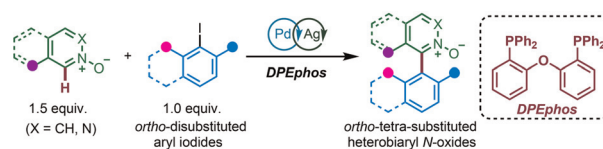


- simple operation
- cheap nickel catalysis
- good functional group tolerance
- facile introduction of CD₃CO- group into complex drug molecules (up to 99% D)
- high efficiency
- excellent chemoselectivity
- a wide range of substrates

7107

Overcoming steric constraints in C–H arylation via Pd/Ag dual catalysis: a shortcut to *ortho*-tetrasubstituted heterobiaryl *N*-oxides

Peng Ye, Ya-Ling Zhang, Le-Nan Xiong, Yang-Jie Mao, Yu-Qi Cui, Yong Luo,* Dan-Qian Xu* and Shao-Jie Lou*

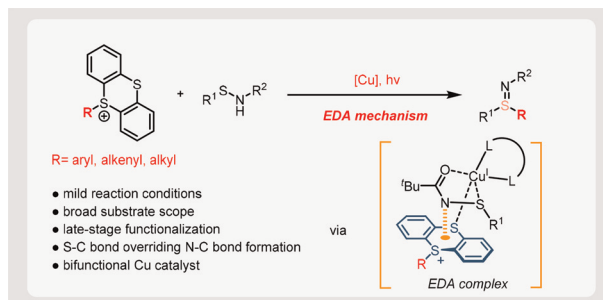


- High regioselectivity & yields (> 19:1 *r.r.* in most cases, up to 92% yield)
- Synergistic Pd-Ag catalysis (D-labeling, X-Ray, & DFT calculations)
- Broad substrate scope (45 examples, *N*-oxides of isoquinoline, phthalazine, & pyridine)

7118

Synthesis of sulfilimines via electron donor–acceptor complexes

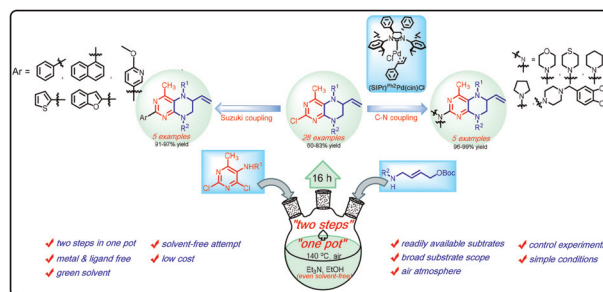
Ke Wu, Junliang Zhang* and Junfeng Yang*



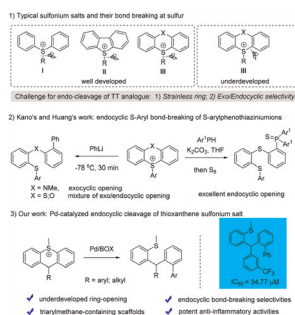
7127

Metal-free cascade S_NAr reaction/allylic amination enabled by triethylamine: a green chemistry approach to access tetrahydropteridines

Bendu Pan, Yunru Wu, Liwei Zhao, Rihui Cao and Liqin Qiu*



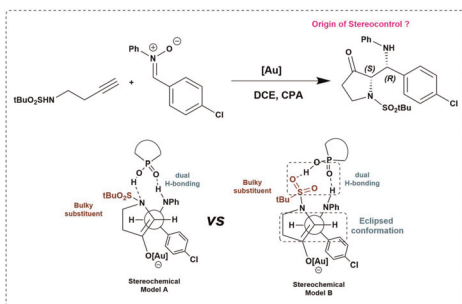
7136



Palladium-catalyzed endocyclic bond cleavage of thioxanthene-derived sulfonium salts

Chengfei Fu, Xing Chen, Junjie Zhao, Linglong Wan, Zhaoyu Sun, Xinhua Liu* and Yazhou Lou*

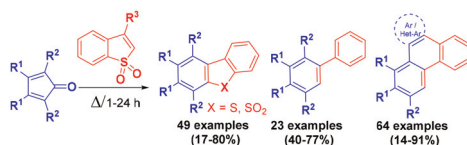
7143



Unraveling steric and dispersion effects in gold catalysis: a DFT study of asymmetric cyclization/Mannich reactions

Yunhe Li,* Rui Jin, Ke Chu, Jinmei Qian and Ruiyu Liu

7151

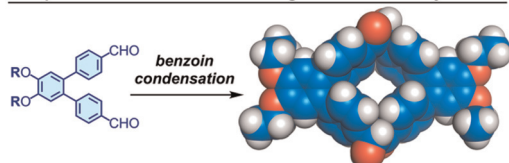


Diels–Alder reaction of substituted cyclopentadienones with benzothiophene *S,S*-dioxides: synthesis of dibenzothiophenes, dibenzothiophene *S,S*-dioxides, acenaphthenes, phenanthrenes, pyrenes, and fluorenes by exploiting thermolysis of Diels–Alder adducts

Kabali Divya Bharathi, Palani Manikandan and Arasambattu K. Mohanakrishnan*

7162

Precipitation-driven Diastereo- and Regioselective Macrocyclization



Investigation of the reaction conditions (as a precipitate)

- alcohol solvent
- co-solvent
- crystallinity of the precipitate
- alkyl chain length
- reaction time
- reaction concentration

Precipitation-driven diastereo- and regioselective macrocyclization *via* benzoin condensation: effects of solvents and alkyl chain lengths

Kosuke Ono,* Junya Fukumoto, Yu Tanoi and Hidetoshi Kawai

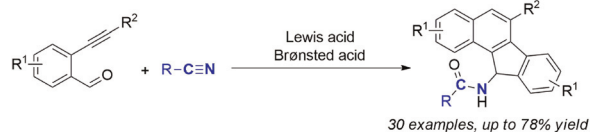


RESEARCH ARTICLES

7168

Synergistic Lewis and Brønsted acid-mediated annulation of *o*-alkynylbenzaldehydes with nitriles for amide-substituted benzo[*a*]fluorenes

Zan Chen, Rong Xiong, Wenting Huang, Huanfeng Jiang and Wanqing Wu*



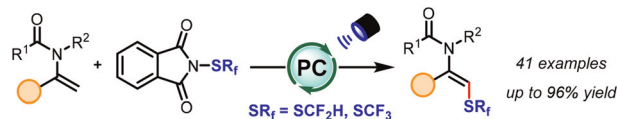
30 examples, up to 78% yield

- ▲ High step economy
- ▲ Simple reaction conditions
- ▲ Efficient construction of C-C/C-N bonds
- ▲ Excellent step-economy and chemoselectivity

7174

Photoinduced regio- and stereoselective C(sp²)-H fluoromethylthiolation of enamides

Jian Han,* Li-Li Zeng, Yue Zhou, Shi-Han Xu, Liang Shen, Wei Lin and Fen-Er Chen*



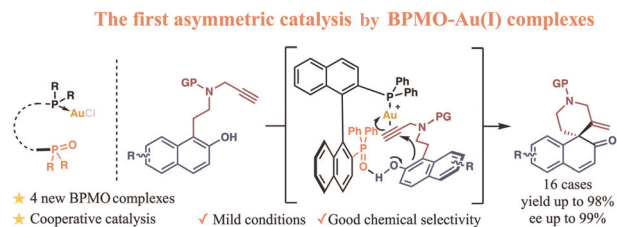
41 examples
up to 96% yield

- ✓ Good step- and atom-economy
- ✓ Modification of drug molecule
- ✓ Broad functional group tolerance
- ✓ Excellent synthetic applications

7181

A chiral bis-phosphine monoxide-gold(I) complex enables asymmetric dearomative cyclization of β -naphthol derivatives

Xiaoyu Liu, Ya-Ru Wan, Yumeng Yang, Runming Wang* and Zili Chen*



★ 4 new BPMP complexes

★ Cooperative catalysis

✓ Mild conditions

✓ Good chemical selectivity

16 cases
yield up to 98%
ee up to 99%

