

Organic & Biomolecular Chemistry

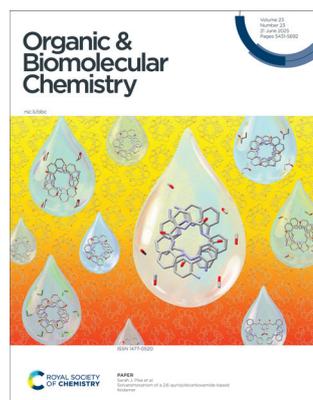
An international journal of synthetic, physical and biomolecular organic chemistry

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IN THIS ISSUE

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Cover

See Sarah J. Pike *et al.*, pp. 5590–5599.

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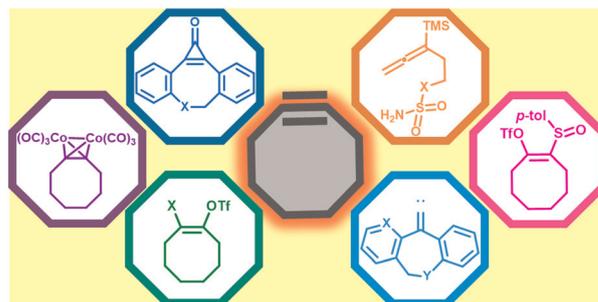
Cover image designed by Sena Ozturk.

REVIEWS

5441

Expanding the bioorthogonal chemistry toolbox: innovative synthetic strategies for cyclooctynes

Andrea Diana, Giuseppina I. Truglio, Elena Petricci and Daniela Lanari*



5457

Recent applications of Cyrene as a chiral synthon

Yu. A. Khalilova* and L. Kh. Faizullina



Environmental Science: Atmospheres

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Fundamental questions
Elemental answers

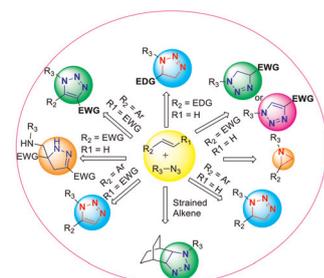


REVIEWS

5483

Ene–azide chemistry in the synthesis of 1,2,3-triazoline/triazole and the corresponding mechanistic aspects

Kunj B. Mishra

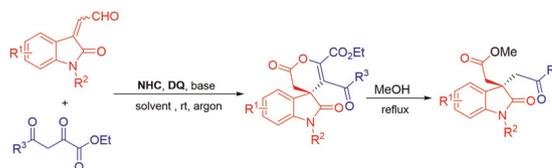
Alkene + Azide \rightleftharpoons 1,2,3-Triazoline or 1,2,3-Triazole or N-Heterocycles

COMMUNICATIONS

5527

Enantioselective access to 3,3'-disubstituted oxindole derivatives by N-heterocyclic carbene catalysis

Xiaomei Wang, Weixing Zeng, Shi-Wu Li,* Jixin Pian and Zhifei Zhao*

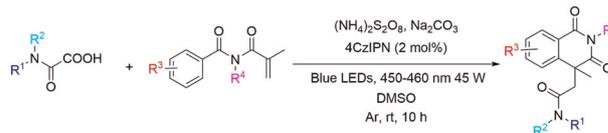


- ✓ Two types of important products, 39 examples in total
- ✓ Highly enantioselective, most products are over 90% ee
- ✓ Gram synthesis and derivatization
- ✓ Mild reaction condition, broad scope and operational simplicity

5533

Synthesis of amide-functionalized isoquinoline derivatives by photo-induced carbamoyl radical cascade amidation/cyclization

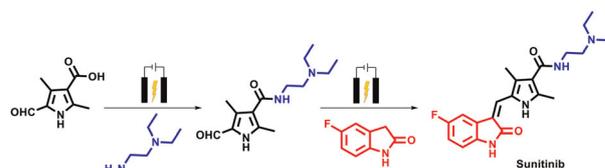
Wei Niu, Yanlong Liu, Erling Dai, Jiarui Sun, Yuyu Dai* and Xiangsheng Xu*



5542

Two-step electrochemically driven synthesis of sunitinib

Anita Alni,* Robby Gus Mahardika, Ade Danova and Elvira Hermawati

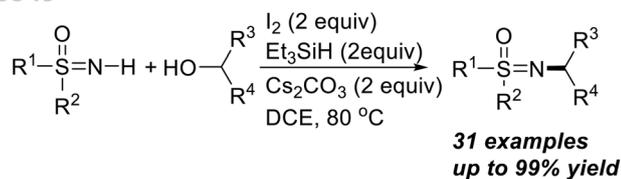


- ✓ Iodide mediator
- ✓ Green and mild reaction conditions
- ✓ Room temperature reactions
- ✓ Graphite electrodes
- ✓ Metal- and oxidant-free



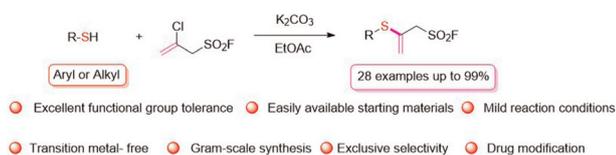
COMMUNICATIONS

5549

**Iodine-mediated *N*-benzylation of *NH*-sulfoximines with alcohols**

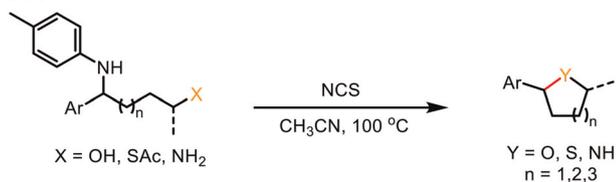
Yuanfang Zhong* and Linjie Yang

5554

**A protocol for selective synthesis of thiol-functionalized allylic sulfonyl fluorides**

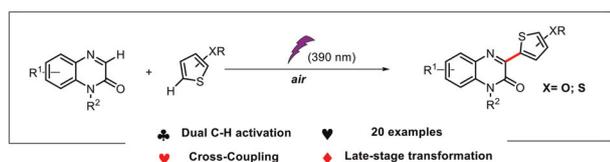
Monday Peter Ajisafe, Heba H. Mohamedy, Eman Fayad, Hanadi A. Katouah and Hua-Li Qin*

5559

**Halogenation-enabled intramolecular deaminative cyclization**

Wenbo Wang and Gang He*

5564

**Photo-induced aerobic cross-coupling of quinoxalin-2(1*H*)-ones with electron-rich thiophenes**

Wei Huang, Tong Wang, Shu-Ying Chen, Quan Zhou* and Lei Wang

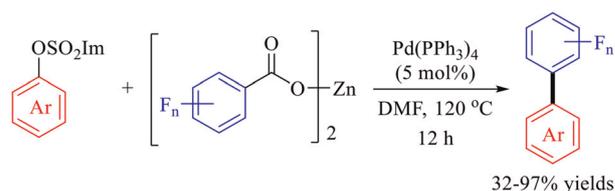


COMMUNICATIONS

5569

Pd-catalyzed decarboxylative coupling of zinc polyfluorobenzoate with aryl imidazolysulfonate for polyfluorinated biaryl synthesis

Chao Gui, Yun Zhou, Hong-Fei Tian, Xue-Qiang Chu, Hao Xu,* Chengping Miao,* Weidong Rao and Zhi-Liang Shen*

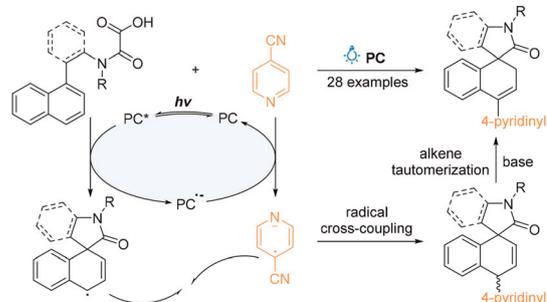


- using readily available aryl imidazolysulfonate as arylating agent
- late-stage functionalization of bioactive molecules
- C-O bond functionalization
- good functional group compatibility
- scalability

5576

Visible-light-induced dearomative 1,4-carbamoylpyridinylation of nonactivated naphthalenes

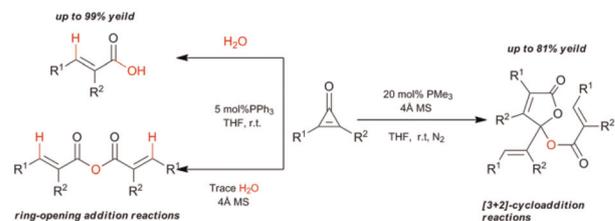
Cheng-An Jin, Hao Liu, Bo-Wen Xie, Ren-Xiao Liang* and Yi-Xia Jia*



5582

Phosphine-catalyzed reaction of cyclopropanones with water: divergent synthesis of highly functionalized γ -butenolides, trisubstituted α,β -unsaturated acids and anhydride

Fujuan Li, Danna Yang, Hongyan Qu, Mingqi Zhu and Suqing Zheng*

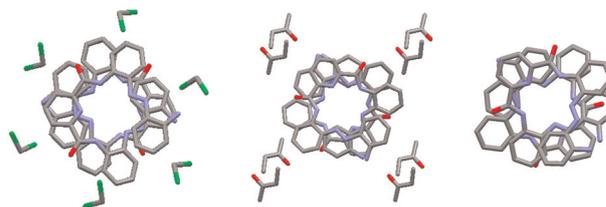


PAPERS

5590

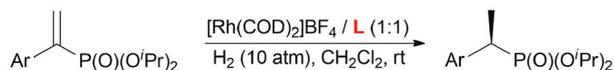
Solvatomorphism of a 2,6-pyridyldicarboxamide-based foldamer

Sena Ozturk, Alexander R. Davis, Colin C. Seaton, Louise Male and Sarah J. Pike*

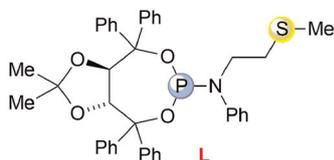


PAPERS

5600



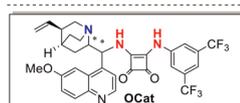
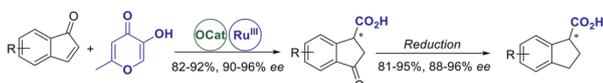
- readily available ligand
- mild reaction conditions
- up to 500 S/C
- up to 100% yield
- up to 99% ee
- 20 examples



Rhodium-catalyzed enantioselective hydrogenation of (1-arylvinyl)phosphonates with TADDOL-based phosphoramidite P,S ligands

Vladislav S. Zimarev, Ilya D. Firsin, Alexander V. Larin, Victor A. Tafenko, Grigoriy N. Bondarenko, Ilya V. Chuchelkin, Vladislav K. Gavrilov, Konstantin N. Gavrilov, Nataliya S. Goulioukina* and Irina P. Beletskaya

5611



- The first asymmetric synthesis
- Short way to indane chiral drugs
- Gram-scale protocols
- Enantiodivergent approach

Analgetics
(R = 6-F) (2-3 steps)
Camonagrel
(R = 5-(1m-(CH₂)₂-O) (6 steps)

Tandem process of asymmetric organocatalysis and selective post-functionalization: enantiodivergent synthesis of bioactive indane-1-carboxylic acid derivatives

Madina Zhanabaeva, Ruslan A. Kovalevsky, Alexander S. Kucherenko,* Alexander A. Korlyukov and Sergei G. Zlotin*

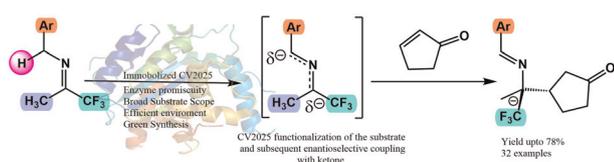
5616



Constructing chiral bicyclo[3.2.1]octanes via low-loading organocatalysis

Etikala Ashok, Pandhiti R. Lakshmi, Revoju Sravanthi and Dhevalapally B. Ramachary*

5629



An enzyme catalyzed umpolung strategy for the green synthesis of Schiff bases and their derivatives

Taimur Khan, Daixi Wang, Khan Bahadar, Muhammad Shahab, Qaim Ali, Tausif Ahmad Khan and Guojun Zheng*

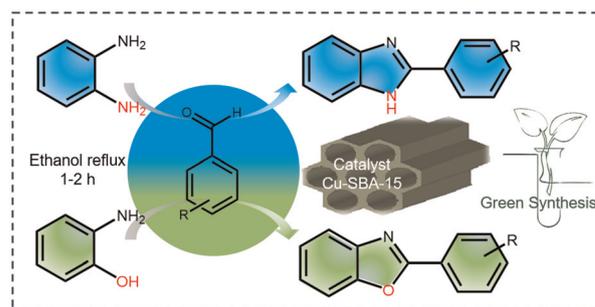


PAPERS

5635

Cu(II)-SBA-15 mediated synthesis of 2-aryl benzimidazoles and benzoxazoles: a sustainable approach

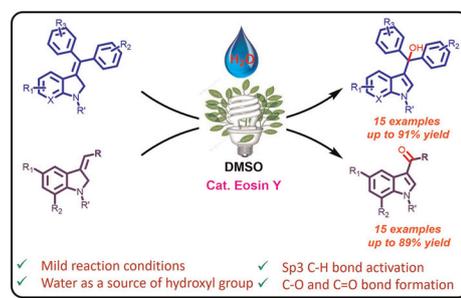
Athira M P, Arun R and Suja Haridas*



5643

Visible-light-triggered organophotoredox-catalyzed oxidation of 3-(benzylidene)indoline to indole-3-carbinols and 3-acyl indoles

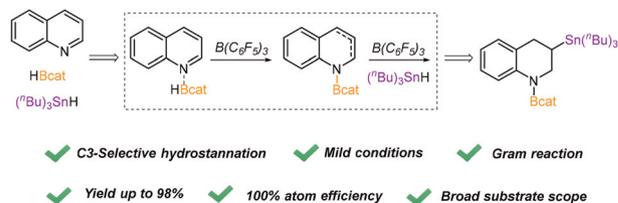
Sourav Ghosh, Gopal Rana, Abhishek Kar, Rajkamal Sahoo and Umasish Jana*



5657

An efficient method for constructing C3-stannyl-tetrahydroquinoline: cascade hydroboration and hydrostannation of quinoline

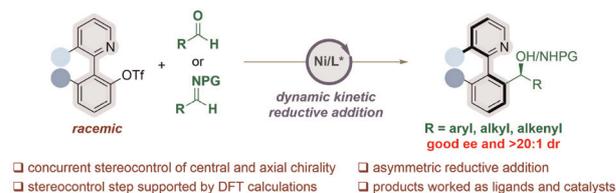
Tianwei Liu,* Jianghua He* and Yuetao Zhang



5666

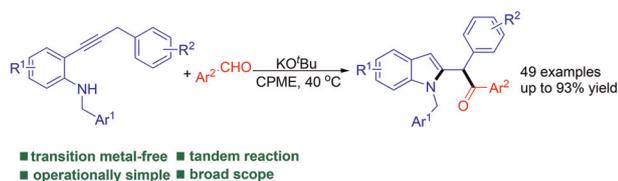
Catalytic dynamic kinetic reductive addition of simple aldehydes and aldimines with heterobiaryl triflates: harnessing both central and axial chirality

Hui Ni, Anyao Liu, Xiaoying Fu, Xinyi Zhang, Xiaowen Xue,* Xiang Lyu,* Aijun Lin* and Yuli He*



PAPERS

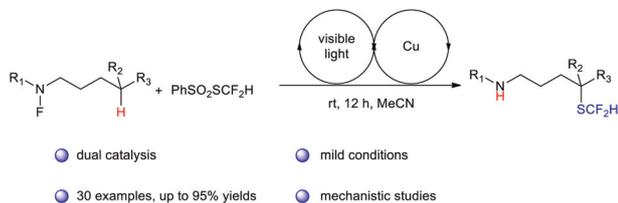
5672



Regioselective synthesis of α -(2-indolyl) ketones with arylaldehydes via a tandem reaction of 2-alkynylanilines

Jianwei Wang,* Qingxia Zhao, Hangxiao Fu and Jie Li*

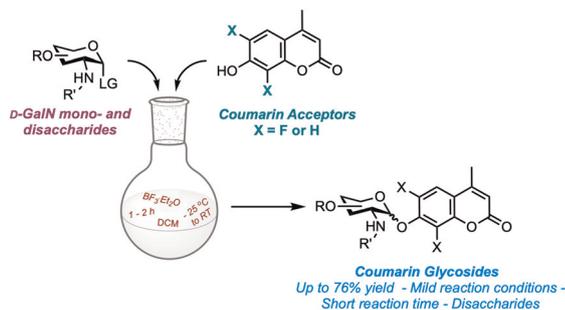
5677



Dual photoredox/copper-catalyzed selective difluoromethylthiolation of remote unactivated C(sp³)-H bonds at room temperature

Shengwen Li, Guanfeng Ji, Wengui Wang* and Shoufeng Wang*

5682



Systematic studies toward the synthesis of D-galactosamine-containing coumarin glycosides

Hannah S. Wootton and Gavin J. Miller*

CORRECTION

5689

Correction: TBAI-mediated electrochemical oxidative synthesis of quinazolin-4(3H)-ones from 2-aminobenzamides and isothiocyanates

Jingbin Huang, Yafeng Liu, Yu Huang, Xiuli Wu, Xiao-Bing Lan, Jian-Qiang Yu, Wenxue Li, Ping Zheng,* Jian Zhang* and Zhenyu An*

