

Organic & Biomolecular Chemistry

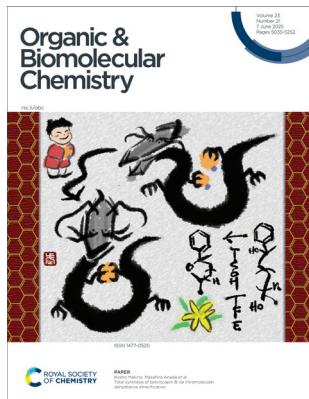
An international journal of synthetic, physical and biomolecular organic chemistry

rsc.li/obc

The Royal Society of Chemistry is the world's leading chemistry community. Through our high impact journals and publications we connect the world with the chemical sciences and invest the profits back into the chemistry community.

IN THIS ISSUE

ISSN 1477-0520 CODEN OBCRAK 23(21) 5035–5252 (2025)



Cover

See Kosho Makino,
Masahiro Anada et al.,
pp. 5133–5138.

Image reproduced
by permission of
Hiroyazu Hosoyama
and Masahiro Anada
from *Org. Biomol. Chem.*,
2025, **23**, 5133.

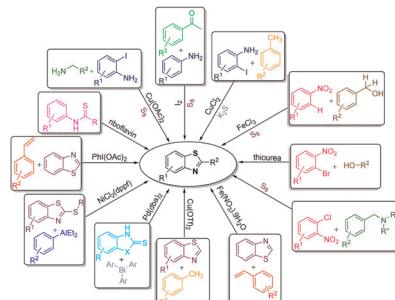
Image designed and created
by Dr Hiroyazu Hosoyama
(independent animation
creator, food and
pharmacognosy scientist).

REVIEWS

5046

Unconventional approaches for synthesis of 2-substituted benzothiazoles

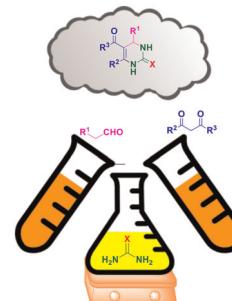
Fatemeh Doraghi, Mohammad Hadi Edareh,
Mehdi Ghanbarlou, Bagher Larijani and
Mohammad Mahdavi*



5064

Synthesis of dihydropyrimidinones via urea-based multicomponent reactions

Anirban Mandal, Prasanjit Ghosh and Sajal Das*



EES Catalysis



GOLD
OPEN
ACCESS

Exceptional research on energy
and environmental catalysis

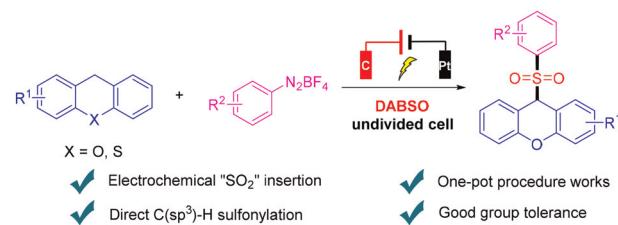
Open to everyone. Impactful for all

rsc.li/EESCatalysis

Fundamental questions
Elemental answers

COMMUNICATIONS

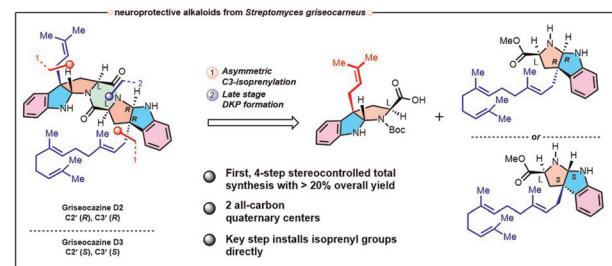
5081

Electrooxidation-induced arylsulfonylation of xanthene derivatives with DABSO as an SO₂ surrogateYi Pan, Zhenjie Qi, Wenzhe Li, Jingbin Huang,
Yu Huang,* Zhenyu An* and Yafeng Liu*

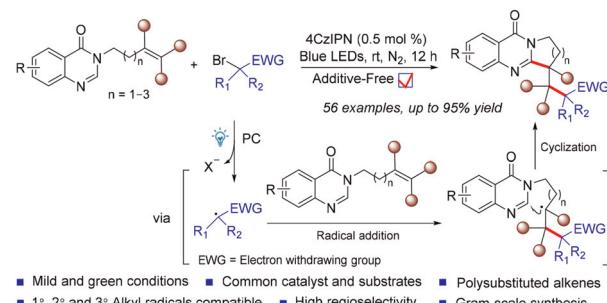
5086

Total synthesis of (−)-griseocazine D2 and D3

Subhasish Pradhan and Rajesh Viswanathan*



5091

Photochemical cascade cyclization of quinazolinone-tethered unactivated alkenes with α-halocarbonyls toward 2,3-fused quinazolinonesYan-Hui Gou, Xiao-Qing Wang, Juan Wang,
Hong-Ya Li, Yun-Yi Zhang and Zheng-Sen Yu*

5096

A formal [4 + 1] annulation incorporating styrylogous aldol condensation to access functionalized 2-styryl-benzofuransManyam Subbi Reddy, Kandivalasa Kamala and
Surisetti Suresh*

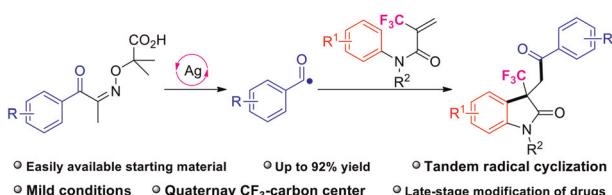
COMMUNICATIONS

5101

**Synthesis of 1,3,4-thiadiazoles from elemental sulfur via three-component cyclization under metal-free conditions**

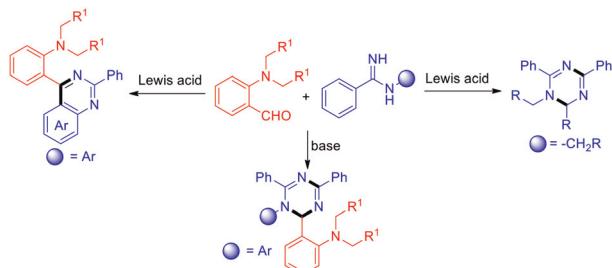
Chuanquan Chu, Yu Liu, Min Mao, Dahan Wang,* Jinbing Liu, Huaixin Wei,* Mingming Yu and Jinhui Cai*

5106

**Silver-catalyzed generation of acyl radicals from α-imino-oxy acids: access to acylated 3-CF₃-2-oxindoles**

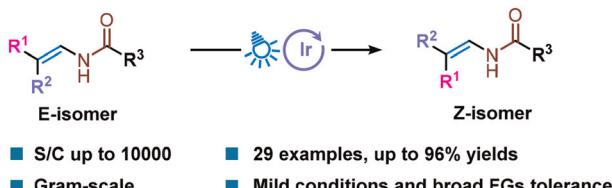
Yating Cao, Yushan Wei, Yingxin Hu, Daosheng Liu,* Mengyao Liu, Jingjing Wang, Chong Li, Pinpin Wang, Liyan Hu* and Feng Li*

5111

**Substrate- and reagent-dependent selective annulation of amidines and 2-tert-amino benzaldehydes**

Yi Zhang, Renchao Ma, Yongmin Ma* and Weiwei Fang*

5116

**Photocatalyzed E → Z contra-thermodynamic isomerization of enamides**

Wei-Yuan Ma,* Guozhu Ding, Zenghui Ye, Xi Zhang, Jian-Xing Xu and Fengzhi Zhang*

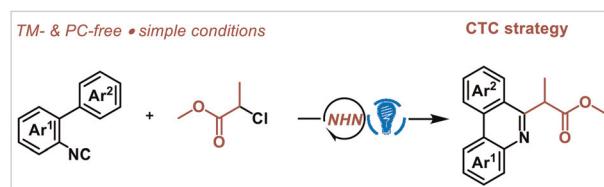


COMMUNICATIONS

5122

Photoinduced N-heterocyclic nitrenium-catalyzed single electron reduction of α -chloro esters for phenanthridine synthesis

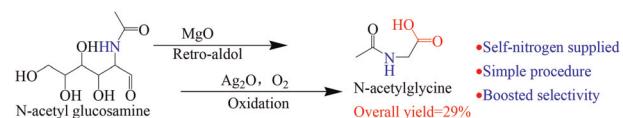
Ling Zhou, Xiao-Xue Pei, Wei Gong,* He Sheng* and Zhu-Sheng Yang*



5126

One-pot green synthesis of *N*-acetyl glycine from renewable *N*-acetyl glucosamine

Qingya Cao, Jinhang Dai,* Ziting Du, Gang Chen, Fukun Li, Ting Qi, Ruiqi Wang, Weilu Wang, Jun Zhao and Chenxi Huang

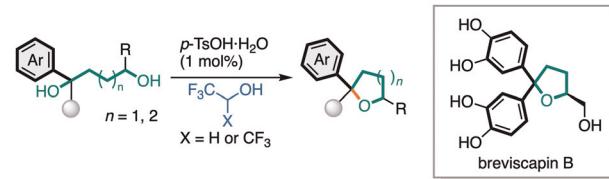


PAPERS

5133

Total synthesis of breviscapin B via intramolecular dehydrative etherification

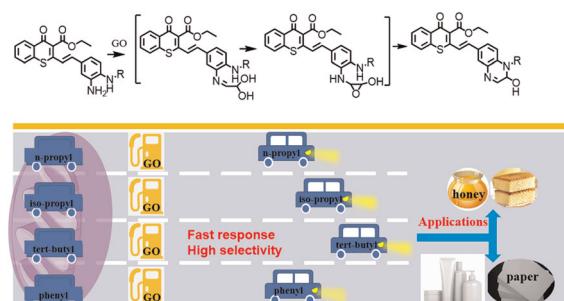
Kosho Makino,* Chiharu Nogami, Shunsuke Sueki and Masahiro Anada*



5139

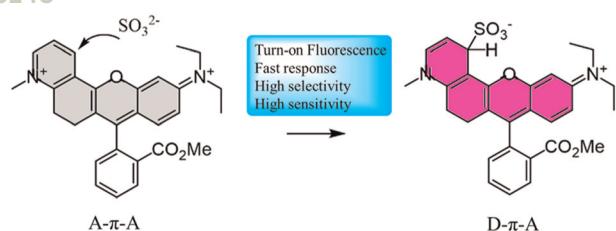
Investigation of the factors influencing the selectivity and response times of glyoxal-selective probes

Yuanyuan Wu, Chang Liu,* Huirong Yao,* Song He, Liancheng Zhao and Xianshun Zeng*



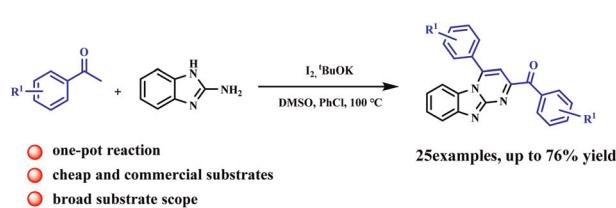
PAPERS

5148

**Regulation of a chromenylium fluorophore with a built-in recognition site for the detection of sulfite**

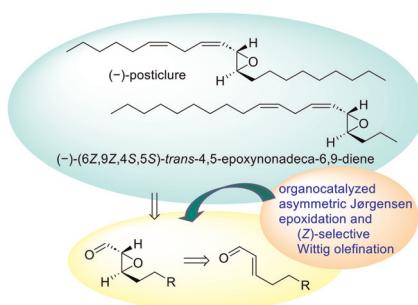
Anqi Hou, Yuanyuan Wu, Yumeng Liu, Chang Liu,* Huirong Yao* and Xianshun Zeng*

5154

 **I_2 -DMSO-mediated [4 + 2] cyclization of methyl ketone with 2-aminobenzimidazole to construct 2,4-disubstituted benzo[4,5]imidazo[1,2-a]pyrimidines**

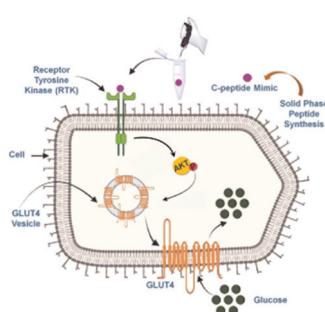
Qian Guo, Mengyi Guo, Luoteng Cheng, Yifan Song, Wanqian Ma, Yibo Song, Suzhen Li, Xiaoqiong Deng, Xinxin Jia and Jianyong Yuan*

5159

**Concise organocatalyzed epoxidation based total synthesis of (–) and (+)-*trans*-posticlures and (–)-(6*Z*,9*Z*,4*S*,5*S*)-*trans*-4,5-epoxynonadeca-6,9-diene**

Rodney A. Fernandes* and Gulenur N. Khatun

5163

**Enhanced glucose regulation potential of C-peptide mimics**

Alpana Boruah, Nazim Uddin Afzal, Sayari Saha, Anusmrita Mazumdar, Dibyajyoti Ozah, Thaneswar Bora, Panchami Prabhakaran, Prasenjit Manna* and Arup Roy*

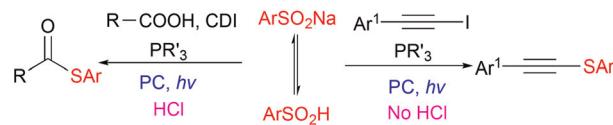


PAPERS

5174

Visible-light-promoted phosphine-mediated synthesis of thioesters and thioalkynes from sodium arylsulfinates

Sen Chen, Yu Yu and Min Chen*

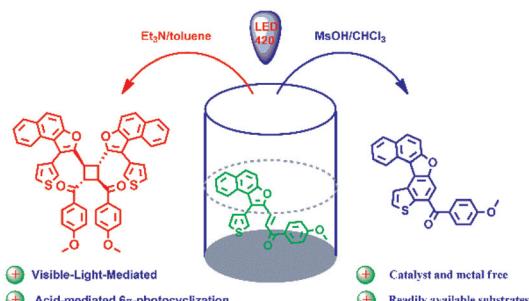


- C(sp²)-S & C(sp)-S bond formation
- phosphines as reductants and O-abtractors
- late-stage thiolation of NSAIDs
- regulating the thiyl radicals by acids

5182

Metal-free, visible-light-mediated phototransformations of *ortho*-biaryl appended chalcones: access to oxathia[5]helicenes and 1,2,3,4-tetrasubstituted cyclobutanes

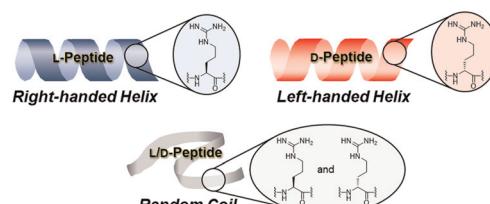
A. V. Zakharov, E. E. Evsikova, P. D. Grebennikova, M. A. Krylova, A. N. Fakhrutdinov and V. Z. Shirinian*



5191

Plasmid DNA delivery using arginine-rich cell-penetrating L/D-peptides containing α -aminoisobutyric acids

Tomohiro Umeno,* Hiroyasu Takemoto and Makoto Oba*

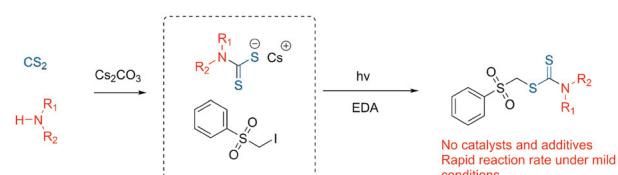


- To what extent do differences in peptide chirality and conformation affect:
- Enzymatic resistance
 - Nanoparticle formation with pDNA
 - Intracellular delivery efficiency of peptide/pDNA complexes

5197

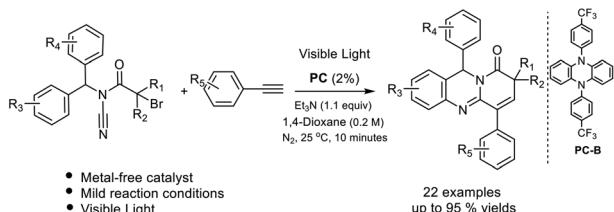
Photocatalytic three-component reaction for synthesis of dithio-carbamates

Xin-Yu Mei, Hui-Ling Lu, Shi-Long Zhong, Bo-Jiang Chen, Zi-Wei Xi,* Qiliang Yuan* and Yong-Miao Shen*



PAPERS

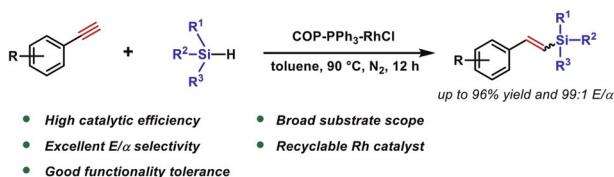
5203



Synthesis of pyridino[2,1-b]quinazolinones via a visible light-induced functionalization of alkynes/nitrile insertion/cyclization tandem sequences in continuous-flow technology

Minghui Wei, Xujia Wang, Jintao Zhang, Jiankun Chen, Chengkou Liu, Zhao Yang, Yuguang Li, Hong Qin,* Zheng Fang* and Kai Guo

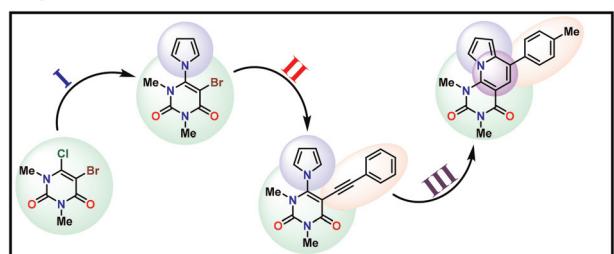
5208



Rhodium catalysts supported on phosphorus-rich covalent organic polymers for sustainable hydrosilylation of alkynes

Xin Liu, Xinxin Han, Jiaxi Cai, Qiaoya Wang, Aizhao Pan and Mingyou Hu*

5215



Synthesis of 6-arylpyrimido[4,5-e]indolizine-2,4(1H,3H)-diones through InCl₃-catalyzed cycloisomerization

Ruben Manuel Figueira de Abreu, Alexander Villinger, Peter Ehlers and Peter Langer*

5224



Chemoselective benzylic Csp³–H bond oxidation reactions catalyzed by the Ag^{II}(bipy)₂S₂O₈ complex

Zaheen Akhter, Sumit Sharma, Radhika Anand, Muzamil Samad, Praveen Kumar Verma and Parvinder Pal Singh*

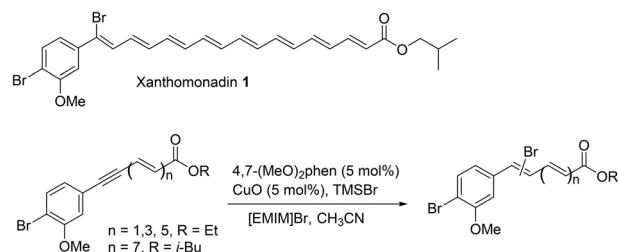


PAPERS

5234

Synthetic studies towards xanthomonadin

Min-Tsang Hsieh* and Hui-Chang Lin



5240

Chemical modification of sialylated oligosaccharides to functionalize nanostructured lipid carriers: exploring two different strategies

Paul Rivollier, Emeline Richard, Antoine Hoang, Aurélien Traversier, Manuel Rosa-Calatrava, Dorothee Jary, Isabelle Texier and Sébastien Fort*

