

# Organic & Biomolecular Chemistry

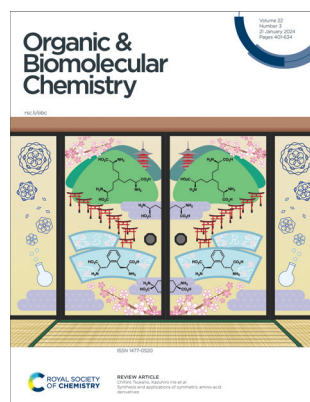
An international journal of synthetic, physical and biomolecular organic chemistry

[rsc.li/obc](https://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 22(3) 401-634 (2024)



### Cover

See Chihiro Tsukano,  
Kazuhiro Irie *et al.*,  
pp. 411–428.

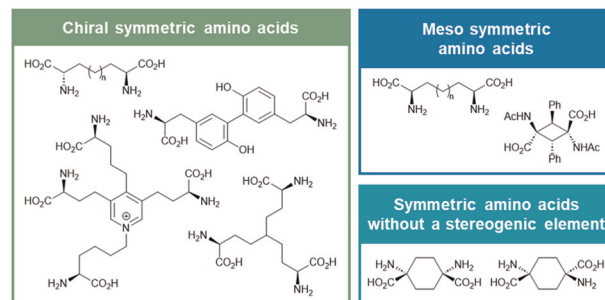
Image reproduced by  
permission of Ayumi Uchino  
and Chihiro Tsukano from  
*Org. Biomol. Chem.*,  
2024, **22**, 411.

## REVIEWS

411

### Synthesis and applications of symmetric amino acid derivatives

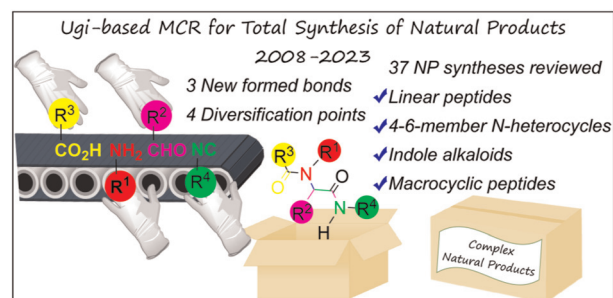
Chihiro Tsukano,\* Ayumi Uchino and Kazuhiro Irie\*



429

### Recent developments in the total synthesis of natural products using the Ugi multicomponent reactions as the key strategy

Enrique L. Larghi, Andrea B. J. Bracca,  
Sebastián O. Simonetti and Teodoro S. Kaufman\*



# Advance your career in science

with professional recognition that showcases  
your **experience, expertise and dedication**

## Stand out from the crowd

Prove your commitment  
to attaining excellence in  
your field

## Gain the recognition you deserve

Achieve a professional  
qualification that inspires  
confidence and trust

## Unlock your career potential

Apply for our professional  
registers (RSci, RSciTech)  
or chartered status  
(CChem, CSci, CEnv)

## Apply now

[rsc.li/professional-development](https://rsc.li/professional-development)

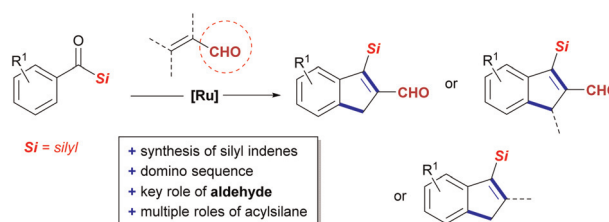


## COMMUNICATIONS

466

### Synthesis of silyl indenenes by ruthenium-catalyzed aldehyde- and acylsilane-enabled C–H alkylation/cyclization

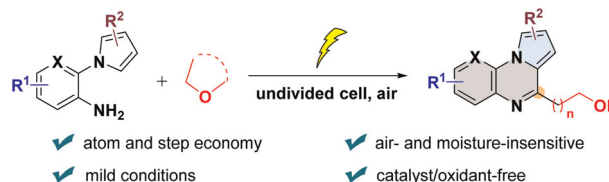
Tao Zhang, Cheng Zhang, Xiunan Lu, Chengxing Peng, Yawei Zhang, Xiong Zhu,\* Guofu Zhong\* and Jian Zhang\*



472

### Electrochemical oxidative dehydrogenative annulation of 1-(2-aminophenyl)pyrroles with cleavage of ethers to synthesize pyrrolo[1,2-a]quinoxaline derivatives

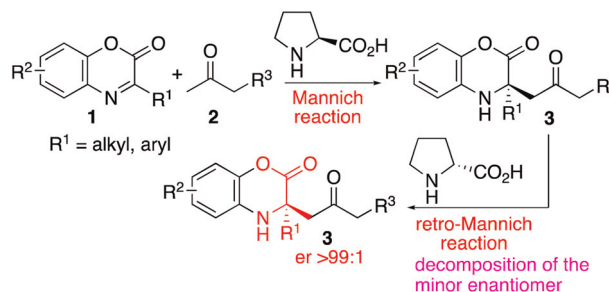
Fengkai Sun, Man Miao, Wenxue Li, Xiao-Bing Lan, Jian-Qiang Yu, Jian Zhang\* and Zhenyu An\*



477

### Organocatalytic enantioselective Mannich and retro-Mannich reactions and combinations of these reactions to afford tetrasubstituted $\alpha$ -amino acid derivatives

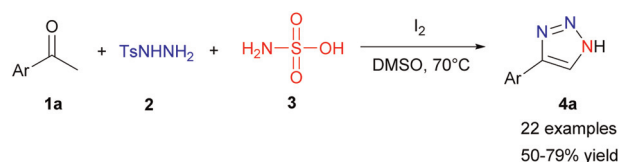
Kuan-Lin Chen and Fujie Tanaka\*



482

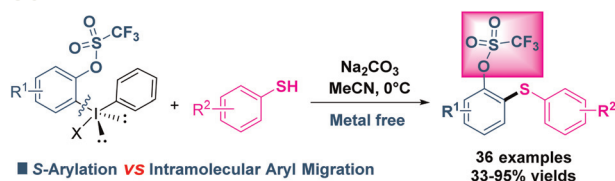
### Azide-free cyclization reaction access to 4-aryl-NH-1,2,3-triazoles: *P*-toluenesulfonyl hydrazide and sulfamic acid as nitrogen sources

Min Li, Qing-Yu Wan, Ri-Lan Lin, Yan-Qing Peng, Wen-Ming Shu,\* Wei-Chu Yu\* and An-Xin Wu



## COMMUNICATIONS

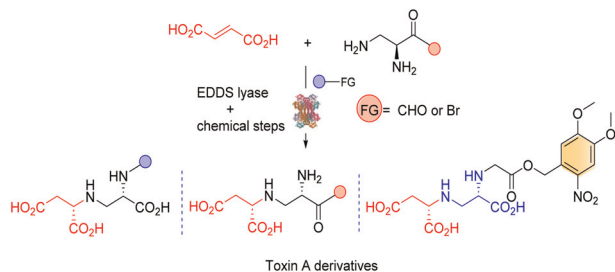
486



### Selective S-arylation of thiols with o-OTf-substituted diaryliodonium salts toward diarylsulfides

Yuxuan Zhang, Yu Wang, Limin Wang and Jianwei Han\*

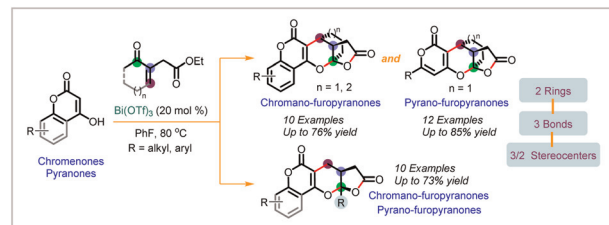
491



### Multigram-scale chemoenzymatic synthesis of diverse aminopolycarboxylic acids as potential metallo-β-lactamase inhibitors

Mohammad Faizan Bhat, Alejandro Prats Luján, Mohammad Saifuddin, Peter Fodran and Gerrit J. Poelarends\*

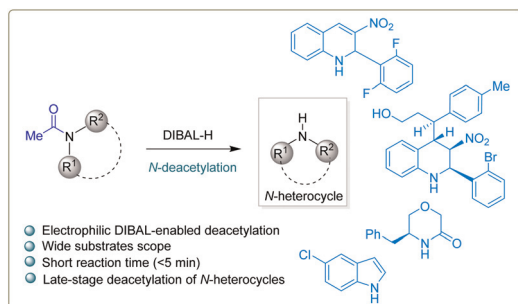
496



### Bi(OTf)<sub>3</sub>-promoted cascade annulation of hydroxy-pyranones and unsaturated γ-ketoesters for the construction of polycyclic bridged pyrano-fuopyranones

Akshay B. Rathod, Balasaheb R. Borade, Pooja I. Sambherao and Ravindar Kontham\*

501



### DIBAL-H-mediated N-deacetylation of tertiary amides: synthesis of synthetically valuable secondary amines

Pushpendra Mani Shukla, Aniruddh Pratap and Biswajit Maji\*

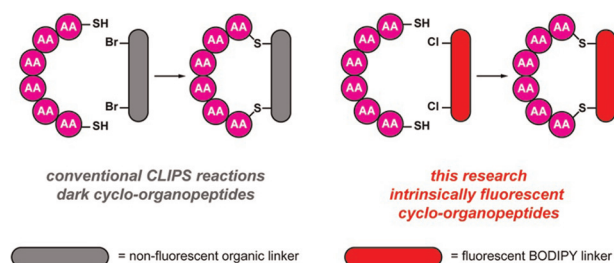


## PAPERS

506

## A fluorescent electrophile for CLIPS: self indicating TrkB binders

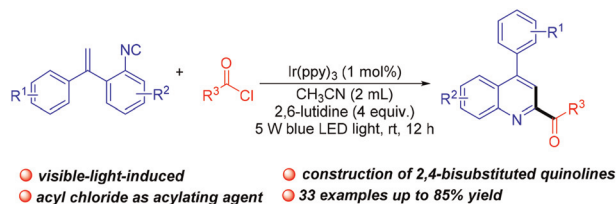
Tye Thompson, Thitima Pewklang, Pornthip Piyanuch, Nantani Wanichacheva, Anyanee Kamkaew and Kevin Burgess\*



513

## Photoredox radical cyclization reaction of o-vinylaryl isocyanides with acyl chlorides to access 2,4-disubstituted quinolines

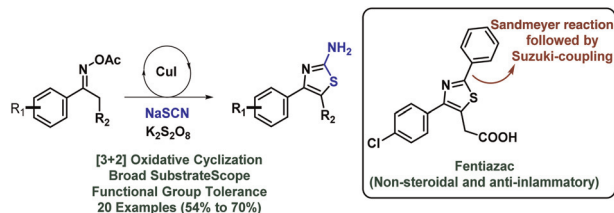
Peng-Fei Huang,\* Jia-Le Fu, Jia-Jing Huang, Bi-Quan Xiong, Ke-Wen Tang and Yu Liu\*



521

## Copper-mediated [3 + 2] oxidative cyclization of oxime acetate and its utility in the formal synthesis of fentiazac

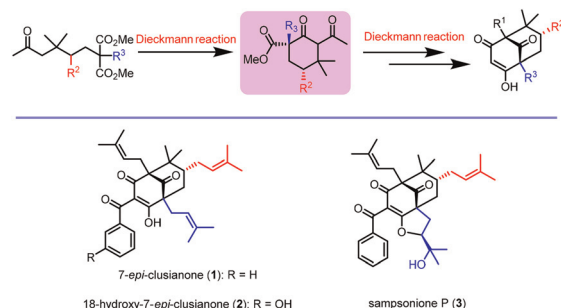
Nitin L Jadhao, Harish B. Musale, Jayant M. Gajbhiye\* and Vivek T. Humne\*



529

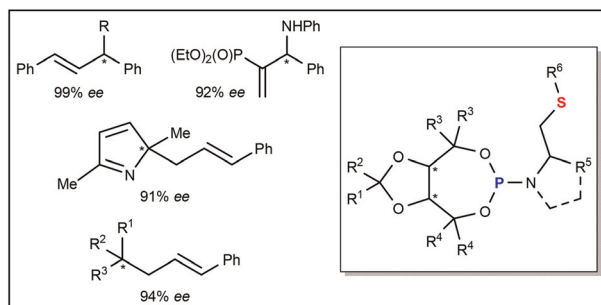
Sequential Dieckmann cyclization enables the total synthesis of 7-*epi*-clusianone and 18-hydroxy-7-*epi*-clusianone

Yunhui Wan, Huaimo Wu, Linhao Xia, Song Liu, Yi Ren, Hongxi Xu\* and Changwu Zheng\*



## PAPERS

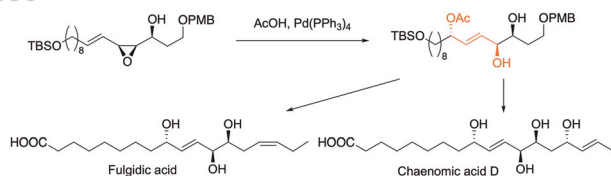
538



### TADDOL-based *P,S*-bidentate phosphoramidite ligands in palladium-catalyzed asymmetric allylic substitution

Konstantin N. Gavrilov,\* Ilya V. Chuchelkin,\* Ilya D. Firsin, Valeria M. Trunina, Vladislav K. Gavrilov, Sergey V. Zheglov, Denis A. Fedorov, Victor A. Tafenko, Ilya A. Zamilatskov, Vladislav S. Zimarev and Nataliya S. Goulioukina

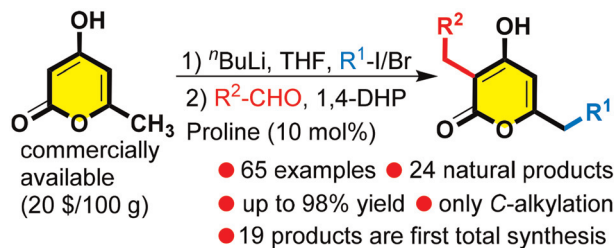
550



### Synthesis of fulgidic acid and the two possible stereoisomers of chaenomic acid D

Narihito Ogawa,\* Keisuke Gonda and Yuichi Kobayashi

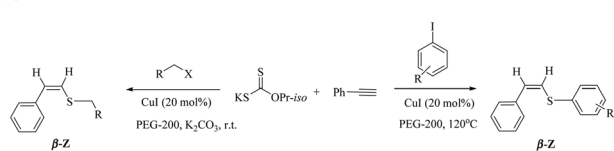
554



### Two-step, high-yielding total synthesis of antibiotic pyrones

Akram Hussain, Revoju Sravanthi, Sunitha Katta and Dhevalapally B. Ramachary\*

561



### CuI-catalyzed regioselective hydrothiolation of alkynes: a thiol-free route to (*Z*)- $\beta$ -alkenyl sulfides

Najmeh Nowrouzi,\* Mohammad Abbasi, Ensieh Safari and Amin Arman



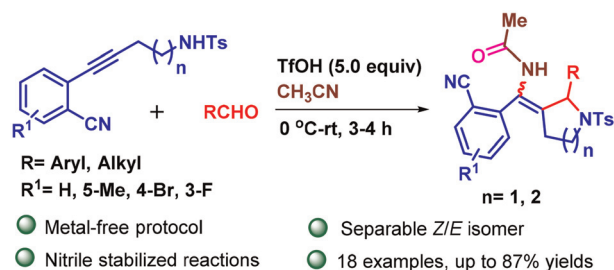


## PAPERS

568

Nitrile stabilized synthesis of pyrrolidine and piperidine derivatives *via* tandem alkynyl aza-Prins–Ritter reactions

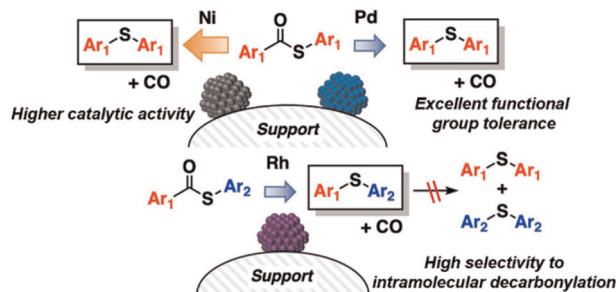
Sudip Shit, Chinmayee Choudhury and Anil K. Saikia\*



579

## Heterogeneously catalyzed decarbonylation of thioesters by supported Ni, Pd, or Rh nanoparticle catalysts

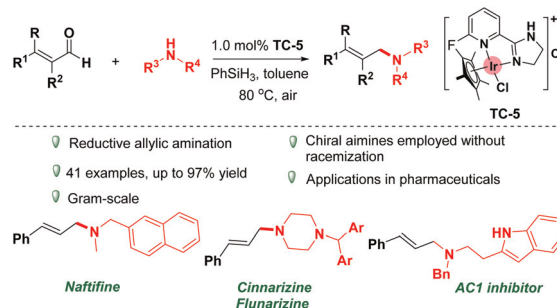
Takehiro Matsuyama, Takafumi Yatabe\* and Kazuya Yamaguchi\*



585

Iridium-catalysed reductive allylic amination of  $\alpha,\beta$ -unsaturated aldehydes

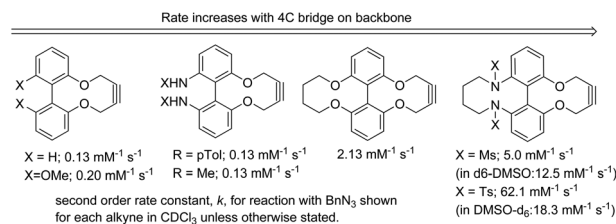
Liang Liu, Renshi Luo,\* Jinghui Tong and Jianhua Liao\*



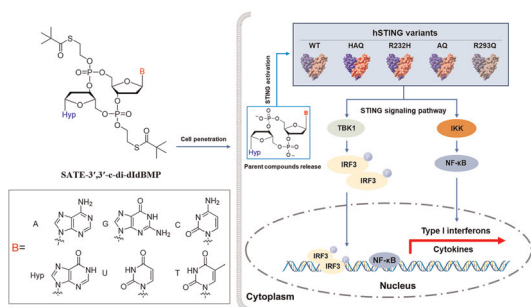
590

## Increasing the versatility of the biphenyl-fused-dioxacyclodecyne class of strained alkynes

Sam Forshaw, Jeremy S. Parker, William T. Scott, Richard C. Knighton, Neelam Tiwari, Samson M. Oladeji, Andrew C. Stevens, Yean Ming Chew, Jami Reber, Guy J. Clarkson, Mohan K. Balasubramanian and Martin Wills\*



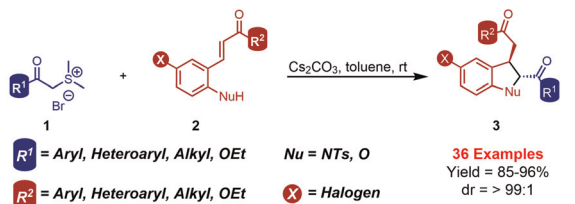
606



## Design, synthesis, and cell-based *in vitro* assay of deoxyinosine-mixed SATE-dCDN prodrugs that activate all common STING variants

Zhiqiang Xie, Yuchen Yang, Dejun Ma and Zhen Xi\*

621



- ♦ formation of two continuous stereocenter
- ♦ excellent yield and diastereoselectivity
- ♦ formation of heterocyclic dihydroindole ring
- ♦ one C-N and one C-C bonds formation
- ♦ wide range of functional group tolerance
- ♦ metal free & mild reaction conditions
- ♦ extended for the synthesis of disubstituted *trans*-dihydrobenzofurans (5 Examples)

## Diastereoselective synthesis of *trans*-2,3-dihydroindoles via formal [4 + 1] annulation reactions of a sulfonium ylide

Anshul Jain, Akanksha Kumari, Ramesh K. Metre and Nirmal K. Rana\*

