

# 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 22(16) 3089–3342 (2024)



### Cover

See Kenjiro Hanaoka *et al.*, pp. 3099–3108.

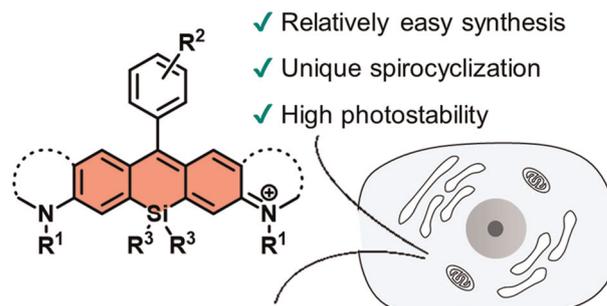
Image reproduced by permission of Kenjiro Hanaoka from *Org. Biomol. Chem.*, 2024, **22**, 3099.

## REVIEWS

3099

### Recent advances in Si-rhodamine-based fluorescent probes for live-cell imaging

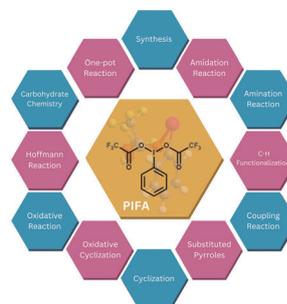
Hisashi Ohno, Eita Sasaki, Sota Yamada and Kenjiro Hanaoka\*



3109

### Phenyliodine bis(trifluoroacetate) as a sustainable reagent: exploring its significance in organic synthesis

Sumit Kumar, Aditi Arora, Sunil K. Singh,\* Rajesh Kumar, Bhawani Shankar and Brajendra K. Singh\*



# RSC Applied Interfaces

GOLD  
OPEN  
ACCESS

Interfacial and surface research  
with an applied focus

Interdisciplinary and open access

[rsc.li/RSCApplInter](https://rsc.li/RSCApplInter)

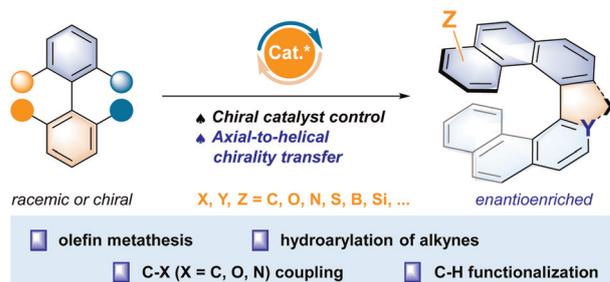
Fundamental questions  
Elemental answers

## REVIEWS

3186

## Catalytic asymmetric construction of helicenes via transformation of biaryls

Peiling Fan, Lun Li and Deyun Qian\*

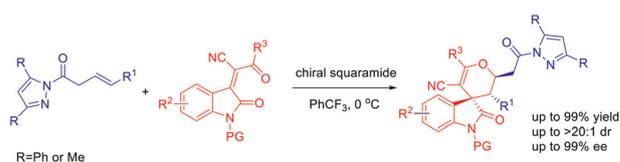


## COMMUNICATIONS

3198

Enantioselective synthesis of spirooxindole-pyran derivatives via a remote inverse-electron-demand Diels–Alder reaction of  $\beta,\gamma$ -unsaturated amides

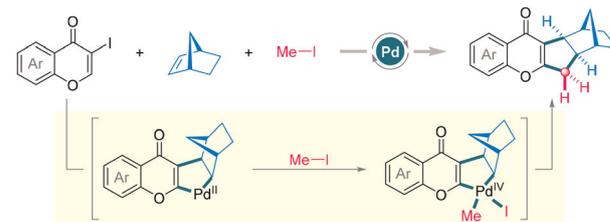
Yuzhen Chen, Jiajia Chen, Lin Zhong, Yili Zhang, Ruoting Zhan, Huicai Huang\* and Yongbo Xue\*



3204

## Iodomethane in C1 chemistry: application in palladium-catalyzed [2 + 2 + 1] annulation

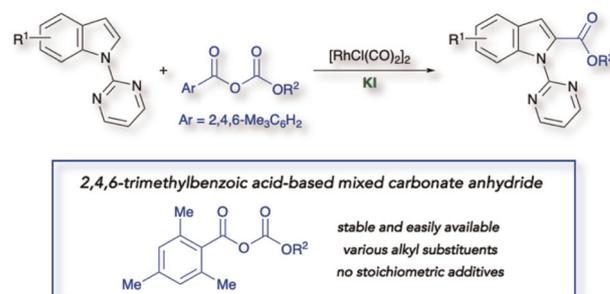
Jin-Ke Zhang, Yu-Chen Fang, Jia-He Chen, Jing Shan, Mei Bai, Qiang Huang, Yong-Zheng Chen and Wen-Yong Han\*



3209

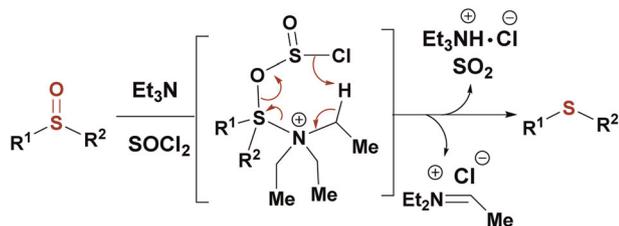
## Rhodium-catalysed additive-free alkoxy-carbonylation of indoles: 2,4,6-trimethylbenzoic acid-based carbonate anhydrides as a versatile alkoxy-carboxyl source

Hirotosugu Suzuki,\* Yuki Ito, Kentaro Yabe, Yosuke Takemura and Takanori Matsuda\*



## COMMUNICATIONS

3215



## Triethyl amine as an effective reducing agent for sulfoxide deoxygenation

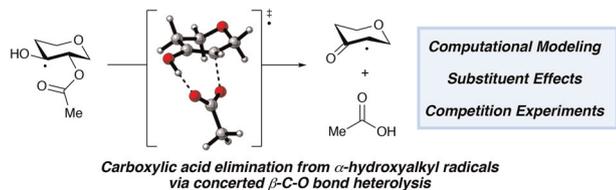
Xiaojing Gao, Fumin Chen, Ming Yu Jin\* and Chen Xu\*

3220

Electrochemical selective divergent C–H chalcogenocyanation of *N*-heterocyclic scaffolds

Kusum Ucheniya, Pooja Kumari Jat, Amreen Chouhan, Lalit Yadav and Satpal Singh Badsara\*

3225

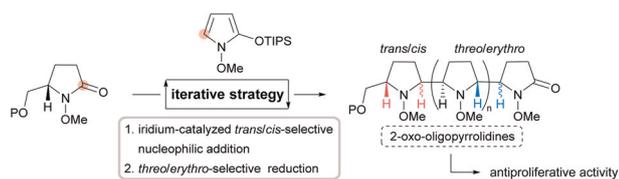


## On the mechanism of carboxylate elimination from carbohydrate monoester-derived radicals

Julia A. Turner, Hendrik Zipse\* and Mark S. Taylor\*

## PAPERS

3230



## Stereodivergent synthesis of 2-oxo-oligopyrrolidines by an iterative coupling strategy

Yasuki Soda, Kumpei Tatsumi, Matteo Forner, Shunsei Sato, Kana Shibuya, Tomoe Matagawa, Siro Simizu, Noritaka Chida, Toshitaka Okamura\* and Takaaki Sato\*

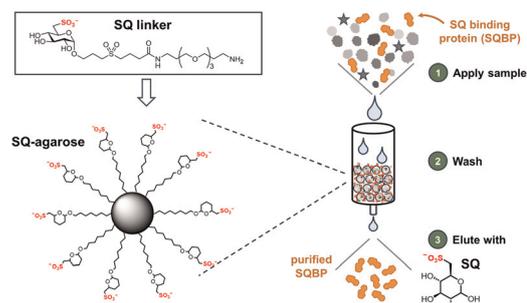


## PAPERS

3237

### Capture-and-release of a sulfoquinovose-binding protein on sulfoquinovose-modified agarose

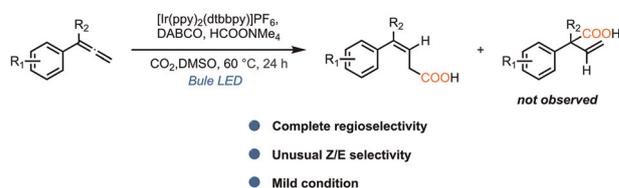
Thimali Arumapperuma, Alexander J. D. Snow, Mihwa Lee, Mahima Sharma, Yunyang Zhang, James P. Lingford, Ethan D. Goddard-Borger,\* Gideon J. Davies\* and Spencer J. Williams\*



3245

### Visible-light-promoted regioselective hydrocarboxylation of allenes with formate salt and CO<sub>2</sub>

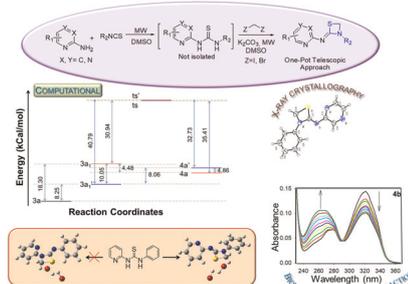
Xian-Ming Zhang, Bao-En Liu, Zhen-Qiang Zhang\* and Zhuang-Ping Zhan\*



3249

### Synthetic access to diverse thiazetidines via a one-pot microwave assisted telescopic approach and their interaction with biomolecules

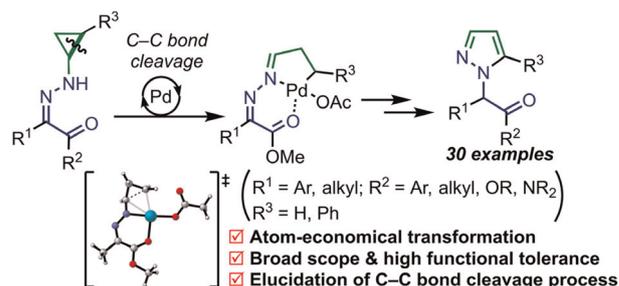
Ramdas Nishanth Rao, Soumyadip Das, Kezia Jacob, Mohammed Mujahid Alam, M. M. Balamurali\* and Kaushik Chanda\*



3262

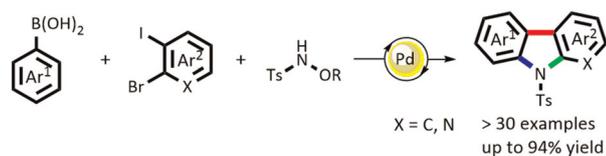
### Palladium-catalyzed C–C bond cleavage of N-cyclopropyl acylhydrazones

Hiroki Fujioka, Motohiro Yasui,\* Shohei Hamada, Kohei Fukumi, Norihiko Takeda, Yusuke Kobayashi, Takumi Furuta and Masafumi Ueda\*



## PAPERS

3268

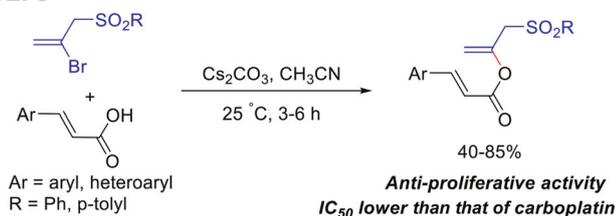


- Simple starting materials
- Simple operation
- High yield
- Wild substrate scope
- Rapidly construct functional organic molecules

### Pd-catalyzed three-component [2 + 2 + 1] cycloamination toward carbazoles

Mingzhu Shen, Min Li and Jingxun Yu\*

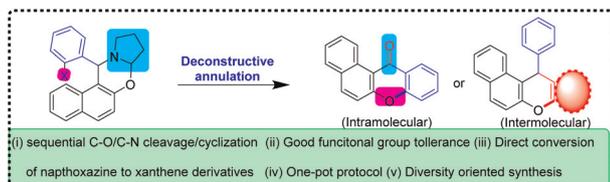
3273



### A formal vinylic substitution reaction for the synthesis of $\alpha,\beta$ -unsaturated enol esters and their anticancer potential

Bhawna Swami, Neetu Kumari, Mulaka Maruthi, Neethu K. Kunjunny and Rajeev S. Menon\*

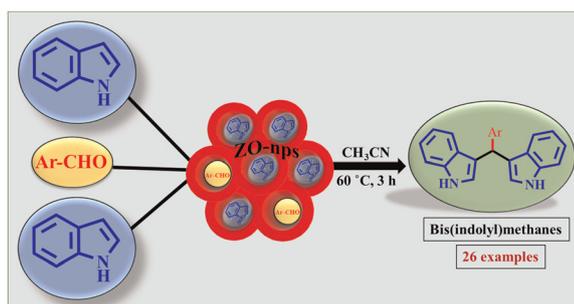
3279



### Deconstructive annulation mediated one-pot synthesis of xanthene derivatives

Balasubramaniyam Manikandan, Subbiah Thamoetharan, Olivier Blacque and Subramaniapillai Selva Ganesan\*

3287



### Zirconium oxide nano-catalyzed synthesis of pharmacologically important bis(indolyl)methanes: a highly efficient and mild approach

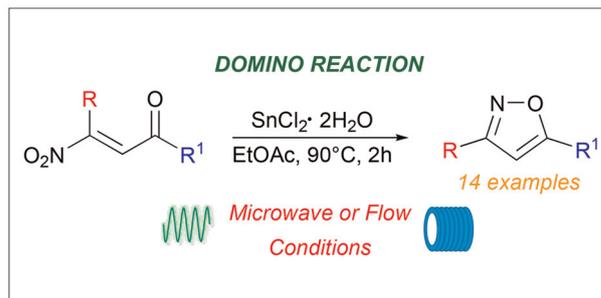
Komal Rathi, Om Shanker Tiwari,\* Varun Rawat,\* Jawahar L. Jat, Dinesh Kumar Yadav and Ved Prakash Verma\*



3299

### Synthesis of 3,5-disubstituted isoxazoles by domino reductive Nef reaction/cyclization of $\beta$ -nitroenones

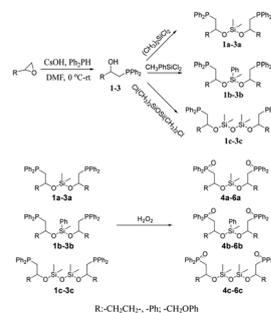
Muhammad Ehtisham Ibraheem Khan,  
Tomas Lighuen Cassini, Marino Petrini and  
Alessandro Palmieri\*



3304

### Siloxane-containing phosphine (oxide) ligands for enhanced catalytic activity of cobalt complexes for hydrosilylation reactions

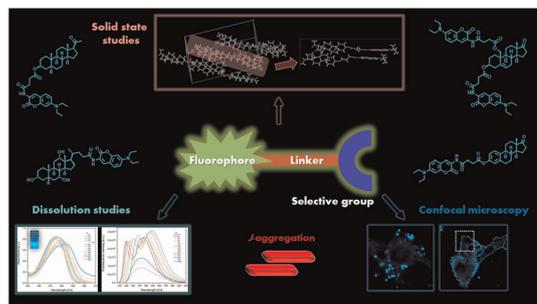
Peng Liu, Jiajian Peng, Ying Bai and Jiayun Li\*



3314

### Exploring the self-assembly dynamics of novel steroid–coumarin conjugates: a comprehensive spectroscopic and solid-state investigation

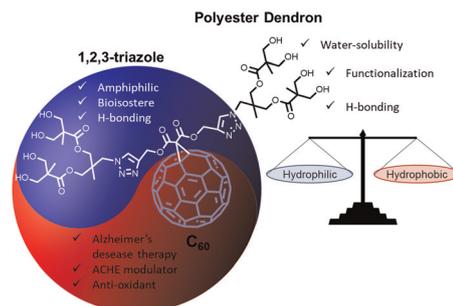
Claudia M. Ramírez-Lozano, Ma. Eugenia Ochoa,  
Pablo Labra-Vázquez, Arturo Jiménez-Sánchez,  
Norberto Farfán and Rosa Santillan\*



3328

### Click synthesis of dendronized malonates for the preparation of amphiphilic dendro[60]fullerenes

Carlos Cruz-Hernández, Perla Y. López-Camacho,  
Gustavo Basurto-Islas, Aaron Rojas, Patricia Guadarrama  
and Melchor Martínez-Herrera\*



## CORRECTION

3340

**Correction: Recent progress of core-substituted naphthalenediimides: highlights from 2010**

Sheshanath V. Bhosale,\* Sidhanath V. Bhosale\* and Suresh K. Bhargava

