

# Organic & Biomolecular Chemistry

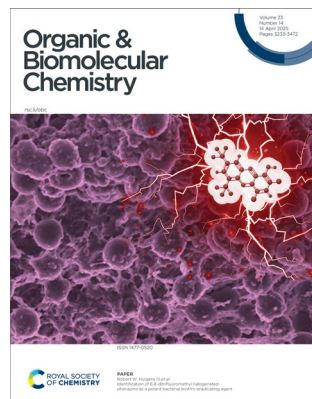
An international journal of synthetic, physical and biomolecular organic chemistry

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## IN THIS ISSUE

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### Cover

See Robert W. Huigens III  
*et al.*, pp. 3342–3357.

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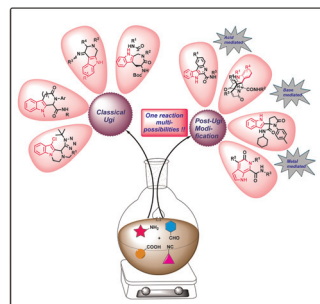
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## REVIEWS

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### Recent advances in Ugi reaction and its post-transformation strategies for crafting diverse indole frameworks

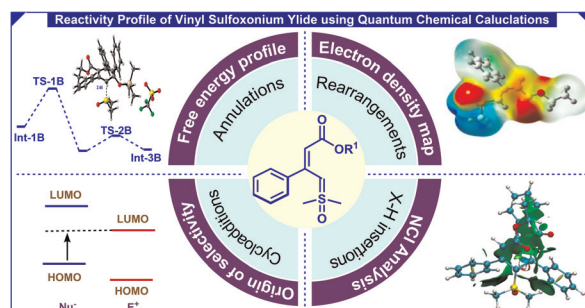
Prashasti Kalhans, Aditi Singh, Shachi Mishra\* and Shashi Pandey\*



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### Computational exploration of vinyl sulfoxonium ylide chemistry

Dinesh Kumar Gopalakrishnan, Janakiram Vaitla\* and Tarak Karmakar\*



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Fundamental questions  
Elemental answers



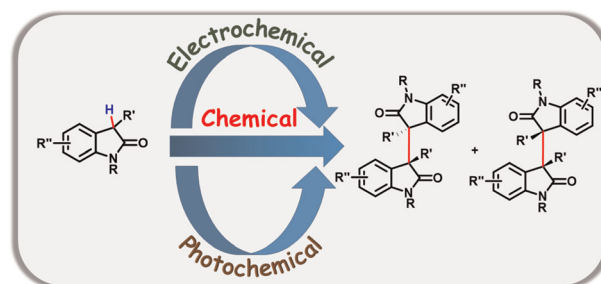


## REVIEWS

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### Homodimerization of 3-substituted-2-oxindoles for the construction of vicinal all-carbon quaternary centers: chemical, photochemical and electrochemical approaches

Sulekha Sharma, Harapriya Behera, Shivani Ahlawat and Amit Paul\*

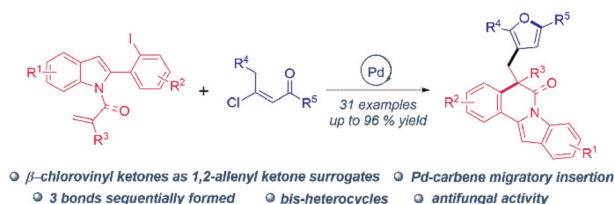


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### Pd-catalyzed domino Heck cyclization/cross-coupling of indoles with $\beta$ -chlorovinyl ketones: synthesis of furan-bearing indolo[2,1- $\alpha$ ]isoquinolines with antifungal activity

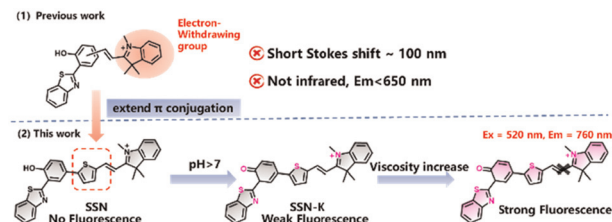
Yongqi Bai, Xingrui Qi, Hanjing Li, Yihui Ban, Rong Zhao, Yian Wang, Jingli Zhang,\* Taolei Sun and Guanbin Gao\*



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### pH-Activated NIR fluorescent probe for sensitive mitochondrial viscosity detection

Manlin Fu, Qingwen Li, Xue Chen, Zhenda Xie\* and Jin-Feng Hu\*



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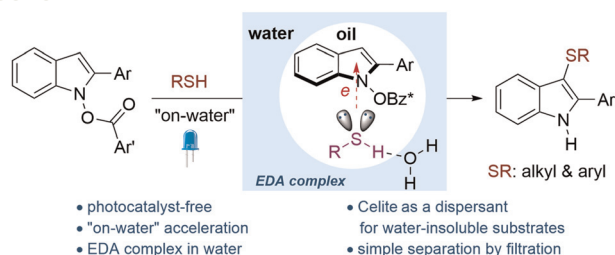
### Visible-light-mediated photocatalytic aerobic oxidative synthesis of pyrazolo[4,3-d]pyrimidin-7(6H)-ones and sildenafil

Hongyou Tian, Haijie Wang, Jiawei Xia, Shaozhong Li, Huaju Li, Yanxing Li, Jin Li\* and Yongke Hu\*



## COMMUNICATIONS

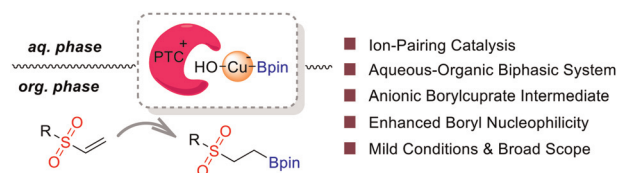
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## On-water accelerated sulfenylation of indole derivatives under visible light irradiation

Jun Sup Lee, Chulyong Lee, Jiwon Jang and Seunghoon Shin\*

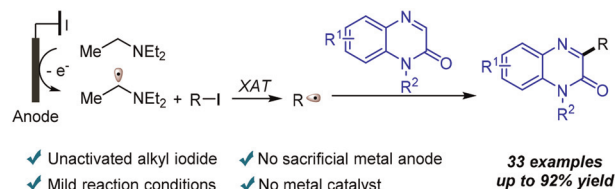
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## Cuprate ion-pair catalyzed conjugate borylation of vinyl sulfones in a biphasic system

Siyu Jiang, Yicen Ge,\* Ai Zhang, Silong Hu, Tao Jin, Jian Chen, Huangfeng Zhang, Yao Qin, Xiaoyan Ma, Jinghua Tang and Jinyu Liu

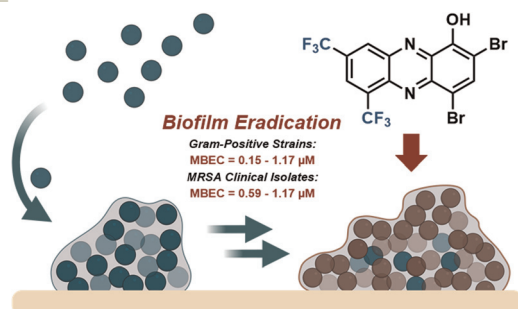
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Electrochemical alkylation of C(sp<sup>2</sup>)-H bonds via halogen-atom transfer (XAT) from alkyl iodides

Changqiong Ke, Qing Tian, Qianqian Zhai, Qirui Dai, Liang Xu, Yu Wei\* and Shuai Liu\*

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## Identification of 6,8-ditrifluoromethyl halogenated phenazine as a potent bacterial biofilm-eradicating agent

Qiwen Gao, Hongfen Yang, Jeremy Sheiber, Priscila Cristina Bartolomeu Halicki, Ke Liu, David Blanco, Sadie Milhous, Shouguang Jin, Kyle H. Rohde, Renee M. Fleeman and Robert W. Huigens III\*

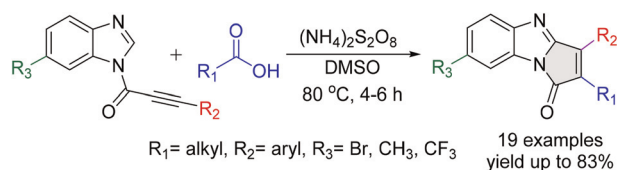


## PAPERS

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**A domino decarboxylative alkylation/annulation for the synthesis of pyrrolo-benzimidazolones**

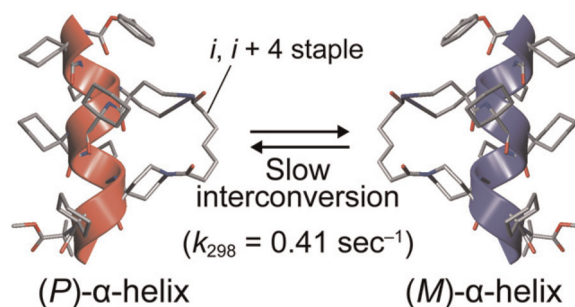
Chada Raji Reddy,\* Kolli Sai Prakash, Ejjirotu Srinivasu, Muppidi Subbarao and Shiva Kumar Kota Balaji



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**Stabilization of optically inactive  $\alpha$ -helices of peptidic foldamers through sequence control and  $i, i + 4$  stapling**

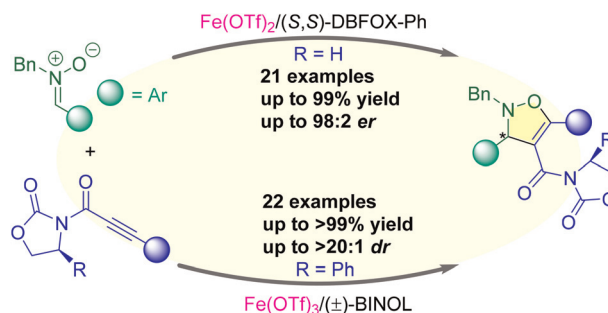
Naoki Ousaka,\* Mark J. MacLachlan,\* Shigehisa Akine\* and Shigenori Fujikawa\*



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**Iron-catalyzed 1,3-dipolar cycloaddition of alkynes and aryl nitrones for the synthesis of chiral  $\Delta^4$ -isoxazolines**

Zhen-Ni Zhao, Shuo Li, Shi-Xuan Zhu, Guo-Hua Liu, Sheng-Yu Li, Yi-Chao Li, Yi-Long Wang and Yi-Yong Huang\*



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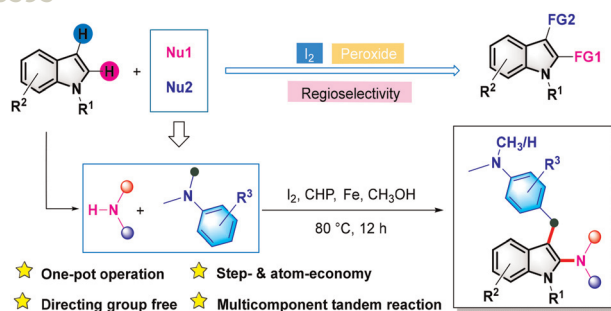
**Studies in enantioselective microbial deuteration**

Carl Recsei,\* Marina Cagnes, Robert A. Russell, Reilly E. Sonstrom and Tamim Darwish



## PAPERS

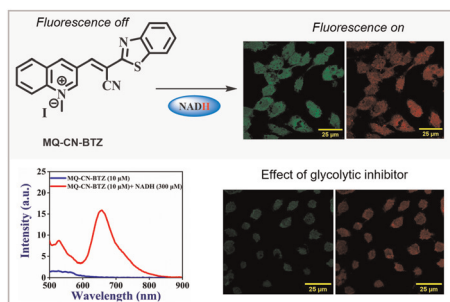
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### A one-pot multicomponent tandem reaction for the rapid synthesis of 2-amino-3-benzylindoles

Pengyan Zhang, Chenrui Liu, Maoyi Dai, Guangyue Wang, Yurong Huang, Lina Zhang, Cheng Liu, Chengjie He, Xiaoxiang Zhang, Zhuan Zhang and Taoyuan Liang\*

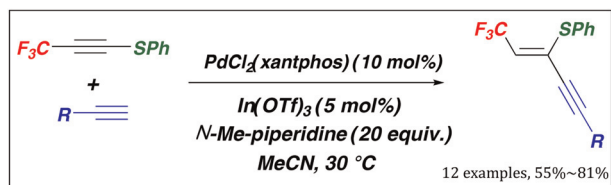
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### Molecular probe to visualize the effect of a glycolytic inhibitor on reducing NADH levels in a cellular system

Pooja Dhingra, Kajal Jaswal, Bidisha Biswas, Iswar Chandra Mondal, Prosenjit Mondal\* and Subrata Ghosh\*

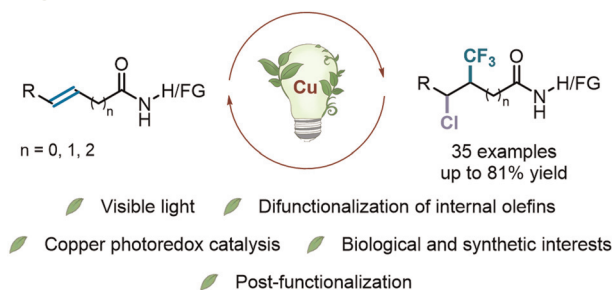
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### Highly regio- and stereo-controlled synthesis of (Z)-4-(trifluoromethyl)-3-(phenylthio)-1-substituted-but-3-en-1-yne via hydroalkynylation of alkynyl thioethers

Akihiro Koga and Takeshi Hanamoto\*

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### Cu-catalyzed photoredox chlorotrifluoromethylation of polysubstituted alkenes and pharmacological evaluation

Shauna Barreto, Renaud Binette, Alexandre Murza, Jean Legault, André Pichette, Pierre-Luc Boudreault,\* Samuel Couve-Bonnaire\* and Thomas Castanheiro\*

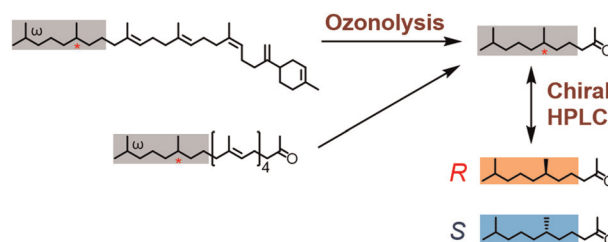


## PAPERS

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Isolation and structural determination of natural products bearing tetrahydrogenated isoprenoid side-chains at their  $\omega$ -termini

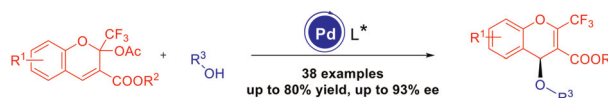
Tohru Abe, Miyu Katano, Ikiru Otsuka, Nozomi Wakamatsu, Saya Takahashi, Daijiro Ueda, Eigo Fukuda, Seiya Endo, Keisuke Nishikawa, Yoko Yasuno, Atsushi Nakayama, Tetsuro Shinada\* and Tsutomu Sato\*



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## Pd-catalyzed asymmetric etherification of 2H-chromenes: enantioselective construction of chiral 4-alkoxy-4H-chromenes

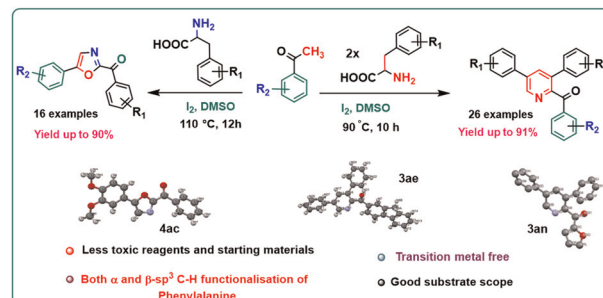
Bangzhong Wang, Luyang Sun, Pengyue Zhang, Shuaibo Zhang, Jinfeng Zhao, Jingping Qu and Yuhua Zhou\*



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Oxidative annulation of L-phenylalanine using I<sub>2</sub>/DMSO: an easy approach for chemoselective synthesis of 2,3,5-trisubstituted pyridines and 2,5-disubstituted oxazoles

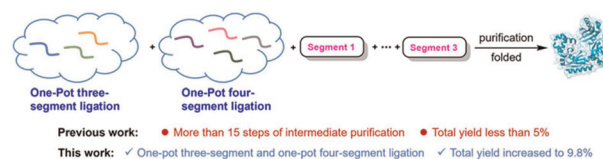
Mohankumar Devaraju and Jagadeesh Prasad Dasappa\*



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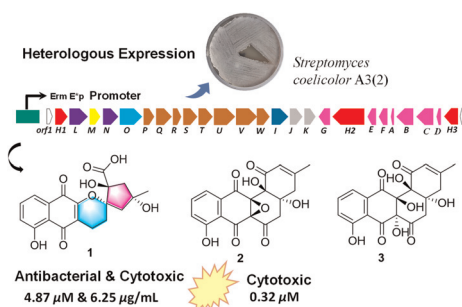
## Efficient chemical synthesis of mirror-image DNA polymerase Dpo4 assisted by one-pot multi-segment condensation

Miao Wang, Tingting Cui, Shuqing Huang, Dongyang Han, Xiangyu Deng, Yanbo Liu and Chaowei Shi\*



## PAPERS

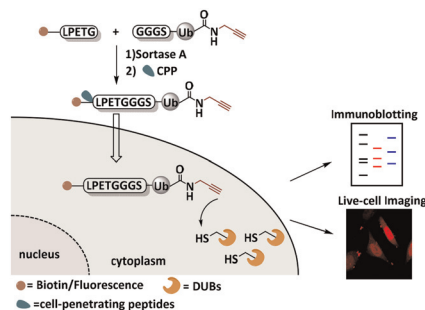
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### Antibacterial and cytotoxic angucyclines discovered by heterologous expression of a type II polyketide gene cluster

Xiao Xu, Jiayi Li, Lang Wang, Xinchun Yue, Falei Zhang, Donghe Lan, Xiaoting Zhang, Hengyi Xu, Qian Che, Tianjiao Zhu, Dehai Li, Ximing Xu\* and Guojian Zhang\*

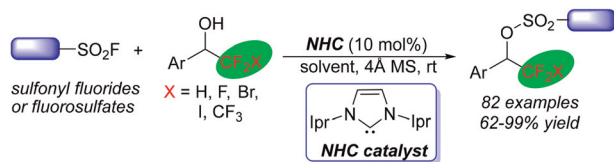
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### Semi-synthesis of functionalized cell-permeable ubiquitin probes via SrtA-mediated ligation

Liwen Liu, Beichen Wang, Shuo Yang, Wenhao Wang, Yu Wang\* and Yi-Ming Li\*

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- silicon reagents free
- recyclable HF scavenger
- mild conditions
- broad substrate scope
- fluorinated products
- gram-scale synthesis

### N-Heterocyclic carbene-catalyzed SuFEx reactions of fluoroalkylated secondary benzylic alcohols

Zhihang Wei, Fang Zhang, Qichao Zhang, Zhihua Cai, Lin He\* and Guangfen Du\*

