

# Organic & Biomolecular Chemistry

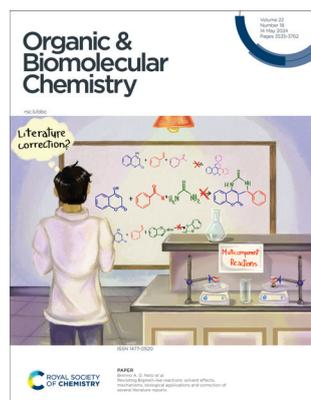
An international journal of synthetic, physical and biomolecular organic chemistry

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## IN THIS ISSUE

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### Cover

See Brenno A. D. Neto *et al.*, pp. 3630–3651.

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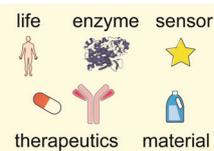
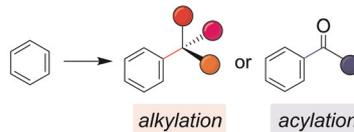
## REVIEWS

3544

### Friedel–Crafts reactions for biomolecular chemistry

Jun Ohata

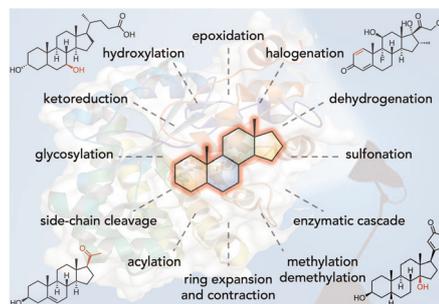
#### Biomolecular Friedel–Crafts Reactions



3559

### Recent developments in the enzymatic modifications of steroid scaffolds

Huibin Wang and Ikuro Abe\*



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Fundamental questions  
Elemental answers

## COMMUNICATIONS

3584

### Synthesis of Asp-based lactam cyclic peptides using an amide-bonded diaminodiacid to prevent aspartimide formation

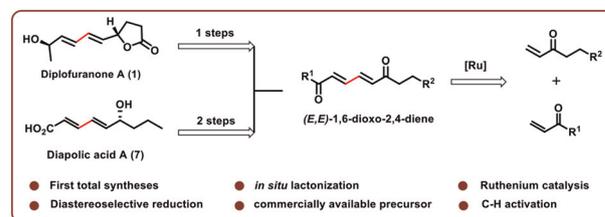
Wen-Jie Li, Jun-You Chen, Hui-Xia Zhu, Yi-Ming Li and Yang Xu\*



3589

### Total synthesis of diplofuranone A and diapolic acid A

Dattatraya H. Dethe,\* Vimlesh Kumar and Nagabhushana C. Beeralingappa



3592

### Synthesis of alkenylphosphine oxides via Tf<sub>2</sub>O promoted addition–elimination of ketones and secondary phosphine oxides

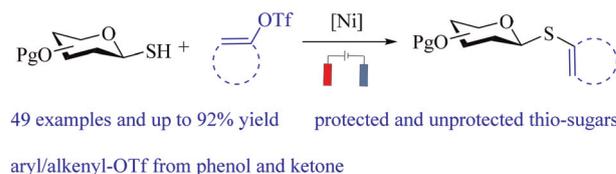
Jiangkai Ma, Lianjie Wang, Anjiang Qiao, Zhongxian Li,\* Fengqian Zhao\* and Junliang Wu\*



3597

### Electrochemical nickel-catalyzed cross-coupling of glycosyl thiols with preactivated phenols and ketones

Fuxin Li, Hui Liu, Wanyu Xing, Qingju Zhang\* and Liming Wang\*



## COMMUNICATIONS

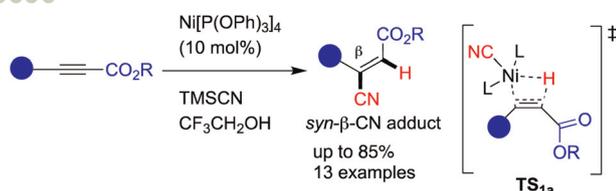
3602

## Dearomative Spirocyclization

**BBr<sub>3</sub>-mediated dearomative spirocyclization of biaryl ynones: facile access to spiro[5.5]dienones**

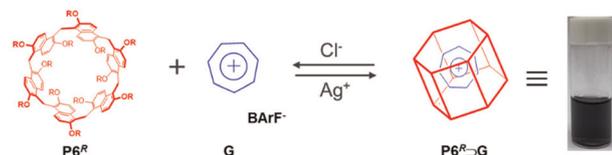
Gaurav Jaiswal and Subhas Chandra Pan\*

3606

**Nickel-catalysed regio- and stereoselective hydrocyanation of alkynoates and its mechanistic insights proposed by DFT calculations**

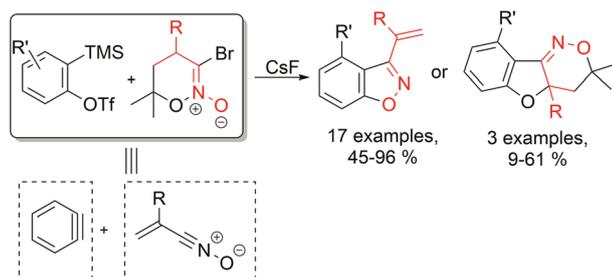
Shigeru Arai,\* Koichi Nakazawa, Xiao-Fei Yang, Masaya Nakajima, Shinji Harada and Atsushi Nishida

3611

**Charge-transfer inclusion complex formation of the tropylium cation with prism[6]arenes**

Guojiao Zhang, Channi Cheng, Zhengxiang Li, Dezhi Zhao and Chengyou Han\*

3615

**3-Halo-5,6-dihydro-4H-1,2-oxazine N-oxides as synthetic equivalents of unsaturated nitrile oxides in the [3 + 2]-cycloaddition with arynes: synthesis of substituted 3-vinyl-1,2-benzisoxazoles**

Alexander A. Lukoyanov, Svetlana A. Aksenova, Andrey A. Tabolin\* and Alexey Yu. Sukhorukov

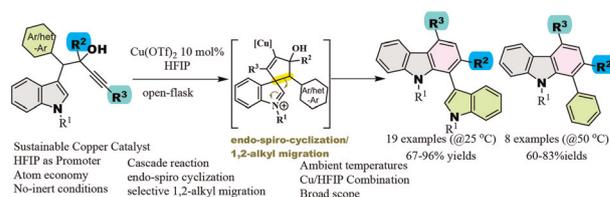


## COMMUNICATIONS

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**Cu(OTf)<sub>2</sub>/HFIP catalyzed regioselective cycloisomerization of indole-C3-functionalized alkynols to carbazoles**

Srinivasarao Yaragorla,\* Tabassum Khan and Sayonika Chakroborty



## PAPERS

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**Revisiting Biginelli-like reactions: solvent effects, mechanisms, biological applications and correction of several literature reports**

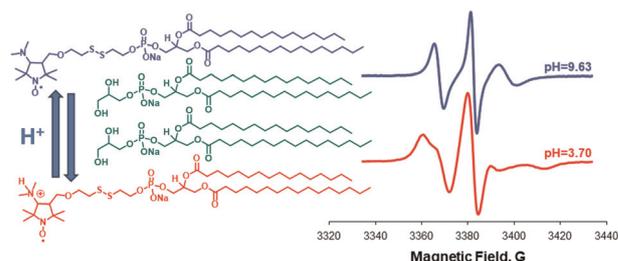
Pedro S. Beck, Arthur G. Leitão, Yasmin B. Santana, José R. Correa, Carime V. S. Rodrigues, Daniel F. S. Machado, Guilherme D. R. Matos, Luciana M. Ramos, Claudia C. Gatto, Sarah C. C. Oliveira, Carlos K. Z. Andrade and Brenno A. D. Neto\*



3652

**Measuring local pH at interfaces from molecular tumbling: A concept for designing EPR-active pH-sensitive labels and probes**

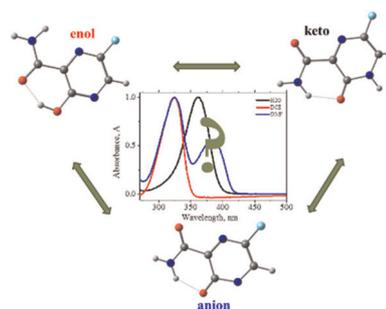
Maxim A. Voinov, Nicholas Nunn, Roshan Rana, Atli Davidsson, Alex I. Smirnov and Tatyana I. Smirnova\*



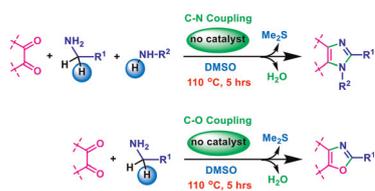
3668

**Structural flexibility of favipiravir and its structural analogues in solutions: experimental and computational insight**

Tatiana P. Gerasimova, Almaz A. Zagidullin, Anastasiia N. Nikolaeva, Robert R. Fayzullin, Aliya M. Saitova, Vasili A. Miluykov, Stefan Grimme and Sergey A. Katsyuba\*



3684

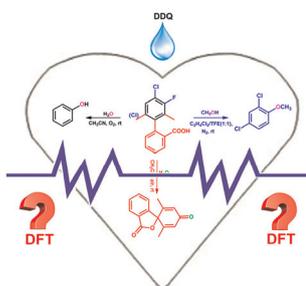


- > Catalyst-free Conditions
- > DMSO Promoted Oxidative Couplings
- > C-N Coupling
- > C-O Coupling
- > Formation of Imidazoles, Oxazoles
- > Green Synthesis
- > Total 67 Examples

## DMSO promoted catalyst-free oxidative C–N/C–O couplings towards synthesis of imidazoles and oxazoles

Debasish Bera, Rajib Sarkar, Tiyasa Dhar, Pinaki Saha, Prasanta Ghosh and Chhanda Mukhopadhyay\*

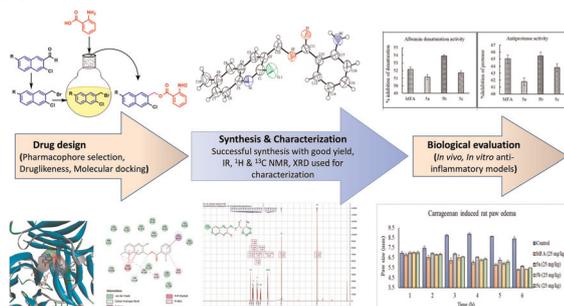
3693



## DFT investigation of the DDQ-catalytic mechanism for constructing C–O bonds

Xiu-Fang Zheng, Da-Gang Zhou\* and Li-Jun Yang\*

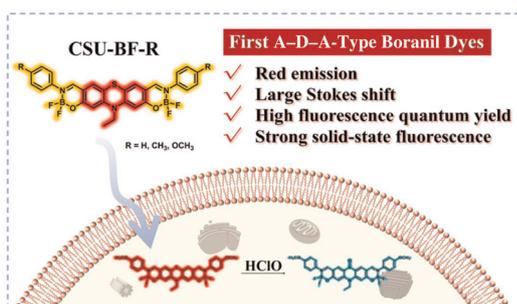
3708



## Design, synthesis, biological evaluation and molecular docking studies of quinoline-anthranilic acid hybrids as potent anti-inflammatory drugs

Sidra Siddique, Khalid Hussain,\* Naureen Shehzadi, Muhammad Arshad,\* Muhammad Nadeem Arshad, Sadaf Iftikhar, Farhat Saghir, Ayisha Shaukat, Muhammad Sarfraz and Nisar Ahmed\*

3725



## Design, synthesis, and biological application of A–D–A-type boronil fluorescent dyes

Wei Luo, Yiling Li, Liang Wang, Yanhua Qin, Qiao Cheng, Guochang Hu,\* Chaoyi Yao\* and Xiangzhi Song\*



## PAPERS

3732

### Sustainable preparation of 2-acylbenzothiazoles under the cooperation of ionic liquids and microwave irradiation

Shoushun Wang, Mengjie Liu, Yiyuan Yue, Xiude Hu, Yalin Zhang,\* Guodong Shen,\* Ruiguo Dong, Lilong Shi, Bing Yu and Xianqiang Huang\*

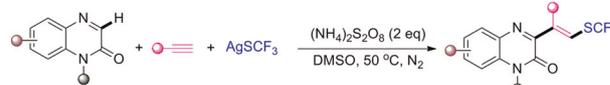


● Metal-free      ● Recyclable Ionic Liquids      ● Green solvents

3740

### Efficient synthesis of SCF<sub>3</sub>-containing 3-alkenyl-quinoxalinones *via* three-component radical cascade reaction

Si-Yu Wang, Chu Liu, Wei Yang, Zhong-Ying Tian, Lin Yuan and Long-Yong Xie\*



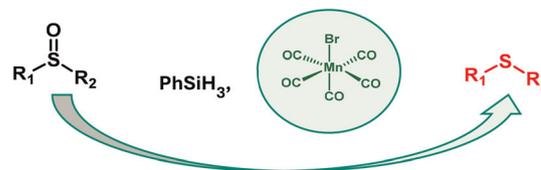
- ★ Transition-metal free
- ★ Excellent stereoselectivity
- ★ Wide substrate scope and FG tolerance
- ★ Mechanism study involving DFT calculation
- ★ Gram-scale synthesis and late-stage functionalizations

CCDC: 2325553

3746

### Reduction of sulfoxides catalyzed by the commercially available manganese complex MnBr(CO)<sub>5</sub>

Daniel L. Lourenço and Ana C. Fernandes\*

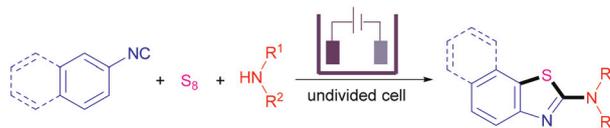


18 examples  
Excellent yields  
Good chemoselectivity  
Short reaction times

3752

### Electro-oxidative three-component cascade coupling of isocyanides with elemental sulfur and amines for the synthesis of 2-aminobenzothiazoles

Peng-Fei Huang,\* Jia-Le Fu, Ying Peng, Jian-Hong Fan, Long-Jin Zhong, Ke-Wen Tang and Yu Liu\*



- Good functional group tolerance
- Aliphatic amines and aryl amines are well-tolerated
- Elemental sulfur as sulfur source
- Room temperature

