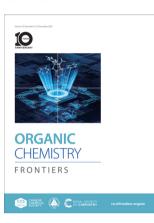
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ISSN 2052-4129 CODEN OCFRA8 10(23) 5807-6044 (2023)



#### Cover

See Zhipeng Xu, Tianli Wang et al., pp. 5817-5822.

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#### Inside cover

See Renana Gershoni-Poranne. Marina A. Petrukhina et al... pp. 5823-5833.

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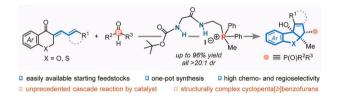
Artwork prepared by the group of Professor Renana Gershoni-Poranne.

#### **RESEARCH ARTICLES**

#### 5817

Access to phosphorus-containing cyclopenta[b] benzofuranols via a serendipitous cascade reaction promoted by a bifunctional phosphonium salt

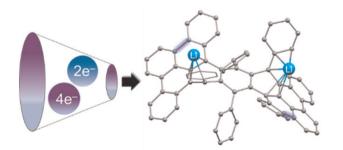
Hui-Lin Hu, Sigiang Fang, Yulin Chen, Wei Wan, Yuqiao Zhou, Zhipeng Xu\* and Tianli Wang\*



#### 5823

Repercussions of multi-electron uptake by a twistacene: a reduction-induced double dehydrogenative annulation

Matthew Pennachio, Zheng Wei, Robert G. Clevenger, Kathleen V. Kilway, Alexandra Tsybizova, Renana Gershoni-Poranne\* and Marina A. Petrukhina\*



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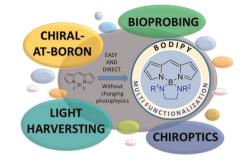
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#### 5834

Dissimilar-at-boron N-BODIPYs: from light-harvesting multichromophoric arrays to CPL-bright chiral-at-boron BODIPYs

César Rav. Edurne Avellanal-Zaballa. Mónica Muñoz-Úbeda, Jessica Colligan, Florencio Moreno, Gilles Muller, Iván López-Montero, Jorge Bañuelos, Beatriz L. Maroto\* and Santiago de la Moya\*



#### 5843

Chromium-catalyzed allylic defluorinative acylation of trifluoromethyl-substituted alkenes with acyl oxime esters

Hongzhang Shi, Haiyan Dong and Chuan Wang\*

#### 5851

A novel synthesis of dihydrofuranyl alcohols through cascade reactions of 1,3-diketones with  $\alpha,\beta$ -unsaturated epoxides

Chengyu Yu, Guoren Yue,\* Penji Yan, Hai Song, Hucheng Shi, Yangfei Wei, Zhengen Song and Xin Jia

#### 5856

Ruthenium(II)-catalyzed C-H activation/ lactonization of aromatic acids with diazonaphthoquinones: regioselective synthesis of polycyclic coumarin frameworks

Chandan Kumar Giri, Sudeshna Mondal and Mahiuddin Baidya\*

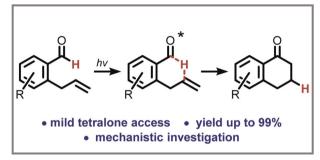
5863

- New reaction mode via carbodiimide anions
- O Convenient method for synthesizing 2-aminopyrimidines
- Metal-free and mild conditions & one-pot multistep procedure
- Readily available substrate & broad substrate scope

Generation and application of carbodiimide anions: efficient construction of 2-aminopyrimidines *via* a cascade [4 + 2] annulation/aromatization sequence

Chuan-Chuan Wang, Xin-Lu Wang, Qing-Long Wang, Yi-Zhi Gong, Xue-Hui Hou, Jun-Tao Liu and Ya-Jing Chen\*

#### 5870



## Photo-hydroacylation: 1-tetralones from *ortho*-allylbenzaldehydes

Veronika Schmalz and Ulrich Koert\*

#### 5876

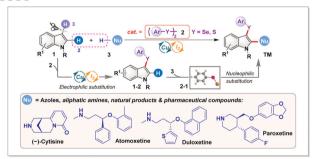


Broad substrate scope & Mild reaction conditions

# Visible light-mediated hydrogen atom transfer and proton transfer for the conversion of (2-vinylaryl) methanol derivatives to aryl aldehydes or aryl ketones

Jun Yan, Ziqi Yu, Hao-Zhao Wei, Min Shi\* and Yin Wei\*

#### 5886



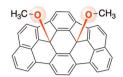
## Organo-catalyzed C2,3-H aminochalcogenation of indoles with secondary (aliphatic) amines

Xiaoxiang Zhang, Chenrui Liu, Yingying Zhang, Fang Shen, Wanxing Wei, Zhuan Zhang and Taoyuan Liang\*

#### 5895

#### Effect of internal oxygen substituents on the properties of bowl-shaped aromatic hydrocarbons

Yoshihiro Takeo, Junichiro Hirano, Daiki Shimizu, Norihito Fukui\* and Hiroshi Shinokubo\*

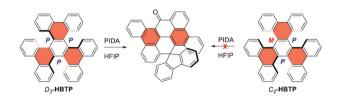


- ✓ Enhancing electron-accepting ability
- ✓ Extending π-conjugation via σ\*-orbitals
- ✓ Altering fullerene-binding behavior

#### 5902

#### Oxidation of a triple carbo[5]helicene with hypervalent iodine

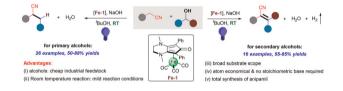
Florian Rigoulet, Albert Artigas, Nawal Ferdi, Michel Giorgi and Yoann Coquerel\*



#### 5908

Blue-light induced iron-catalyzed chemoselective  $\alpha$ -alkylation and  $\alpha$ -olefination of arylacetonitriles with alcohols

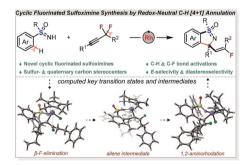
Dingguo Song, Shiliang Wang, Weiwei Huang, Rong Chen, Fangyuan Hu, Lingxin Cheng, Xianghua Zhao, Fei Ling\* and Weihui Zhong\*



#### 5916

Rh(III)-catalyzed redox-neutral C-H [4 + 1] annulation of sulfoximines with  $\alpha,\alpha$ -difluoromethylene alkynes: diastereoselective synthesis of E-monofluoroalkenyl benzoisothiazole 1-oxides

Ting Wang, Zhi-Huan Peng, Liexin Wu, Qingwei Song, Qianying Li, Hui Gao,\* Zhongyi Zeng,\* Zhi Zhou and Wei Yi\*



# Ar¹-H Cs<sub>2</sub>CO<sub>3</sub> (1.0 eq.) EtOH, r.t. Stable electrophilic diazo sources | Simple operation | mild condition | free of transition metals | good air compatibility |

## Mild diazenylation of $C_{sp^2}$ —H and $C_{sp^3}$ —H bonds via arylazo sulfones

Yulei Zhao,\* Shuai Li, Yuhang Fan, Chao Chen, Xiaotong Dong, Ruiqing Wang and Yuan-Ye Jiang\*

5933

A non-diazo approach to functionalized (2-furyl)-2-pyrrolidines through a cascade reaction of enynal-derived zinc carbenoids with  $\beta$ -arylaminoketones

Chenxin Ou, Bidhan Ghosh and Indrajeet Sharma\*

# 

R<sub>2</sub>
47 examples
(dr>20.1, up to 98% ee)

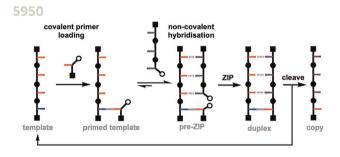
Q vicinal quaternary and tertiary stereocenters

Q high diastereo- and enantioselectivity

A posed substrate econo. Q gram-scale synthesis. Q analication in modification of natural products and druns

## Asymmetric dearomative reductive arylallylation of indoles with trifluoromethyl alkenes by nickel catalysis

Xinmiao Huang, Xin Tan, Xu Zhang, Zhiyong Song, Ming Ma, Bo Chen and Yuanhong Ma\*



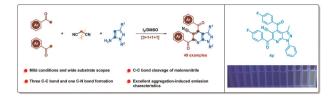
## Replication of synthetic recognition-encoded oligomers by ligation of trimer building blocks

Diego Núñez-Villanueva and Christopher A. Hunter\*

#### 5958

 $I_2$ -promoted formal [3 + 1 + 1 + 1] cyclization to construct 5-cyano-1H-pyrazolo[3,4-b]pyridine using malononitrile as a C1 synthon

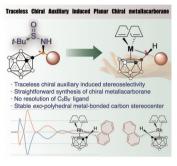
Zhi-Cheng Yu, Xi Shen, You Zhou, Xiang-Long Chen, Li-Sheng Wang, Yan-Dong Wu, Hao-Ke Zhang, Kai-Lu Zheng\* and An-Xin Wu\*



#### 5965

#### Asymmetric synthesis of metallacarboranes using a traceless chiral auxiliary

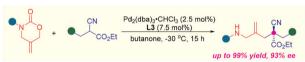
Jiao Jiao, Pei He, Tilong Yang, Tingwei Zhang, Linghua Wang, Tian Han, Yong Nie, Zhenyang Lin and Pengfei Li\*



#### 5971

Palladium-catalyzed enantioselective decarboxylative allylic alkylation of  $\alpha$ -benzyl cyanoacetates: access to chiral acyclic quaternary carbon stereocenters

Qing Bao, Ting-Jia Sun, Yan-Ping Zhang, Zhen-Hua Wang, Yong You, Zhen-Zhen Ge, Ming-Qiang Zhou, Jian-Qiang Zhao\* and Wei-Cheng Yuan\*



- ✓ chiral Pd complex controls the enantioselectivity
- $\checkmark$  asymmetric decarboxylative allylic alkylation of  $\alpha$ -benzyl cyanoacetates
- ✓ constructing nitrile-containing acyclic quaternary carbon stereocenters ✓ good enantioselectivity, gram-scale synthesis and further transformations

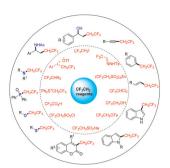
#### 5978

 $FeCl_3$ -catalyzed  $AB_2$  three-component [3 + 3] annulation: an efficient access to functionalized indolo[3,2-b]carbazoles

Gowsia Jan, Diksha Rajput, Anish Gupta, Dolma Tsering, Muthu Karuppasamy, Kamal K. Kapoor and Vellaisamy Sridharan\*

#### **REVIEWS**

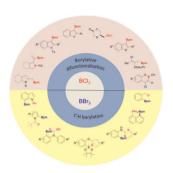
#### 5986



#### Recent advances in trifluoroethylation reaction

Ming-Xi Zhou, Shuai Han, Yue Wang, Wei Zhang, Zhen Wang\* and Yao-Fu Zeng\*

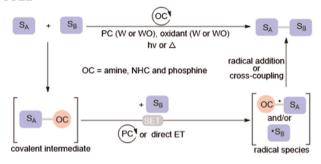
#### 6010



## $BX_3$ -mediated borylation for the synthesis of organoboron compounds

Chun-Hua Yang

#### 6021



## Nucleophilic organocatalysis involving radical intermediates

Hai-Bin Yang

#### **CORRECTION**

#### 6041

Correction: An overview of the applications of chiral phosphoric acid organocatalysts in enantioselective additions to C=O and C=N bonds

Xabier del Corte, Edorta Martínez de Marigorta, Francisco Palacios, Javier Vicario\* and Aitor Maestro\*