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#### Cover

See Stefan Bräse et al., pp. 3546-3550.

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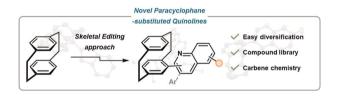
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#### **RESEARCH ARTICLES**

#### 3546

## [2.2]Paracyclophane-substituted quinolines by skeletal editing strategies

Tilman Köhler, Olaf Fuhr and Stefan Bräse\*



#### 3551

Pseudo-4-component photoredox-catalyzed alkylative amidination/carbamoylation of styrenes with isocyanides and redox-active esters

Alexandre Simon, Virgile Rouffeteau, Camilla Acconcia, Sylvestre P. J. T. Bachollet, Jérémy Forté, Mariateresa Giustiniano, Laurence Grimaud\* and Maxime R. Vitale\*





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#### 3558

Cyclometallated chiral Ru complexes with a single labile coordination site for asymmetric reduction of aminoketones

Haoying Liu, Weijun Tang,\* Jianliang Xiao and Chao Wang\*

$$\begin{array}{c|c}
O & P & Proh \\
R^2 & R^1 & R^2 \\
\hline
74 \text{ examples, up to 99% yield and >99% ee}
\end{array}$$

- AH and ATH of aminoketones
- AH and ATH of aminoketones with excellent enantioselectivities 

  Modular cyclometallated catalysts with a single labile coordination site

#### 3568

Intramolecular and intermolecular benzannulation of arylethanone derivatives enabled by visible light-induced catalytic generation of tether-tunable distonic radical anions

Zhiyou Yu, Ziye Zhan, Kang Fu and Lei Shi\*

#### 3579

Photoinduced synthesis and biological investigation of aryl trifluoromethyl tellurides

Peng-Yu Guan, Fei Li, Lijun Han, Yao Yu and Cheng-Pan Zhang\*

#### 3587

Ni-catalyzed C(sp<sup>3</sup>)-C(sp<sup>3</sup>) cross-coupling to access γ-carbonyl alkylboronates and alkylsilicons enabled by cyclopropanol-derived homoenolates

Linfei Zhu, Yang Sun and Hui Wang\*

HO R [Ni] 
$$X = Br \text{ or } I$$
  $R = H \text{ or } alkyl$ 
 $R = H \text{ or } alkyl \text{ or } alkyl$ 

 C(sp³)−C(sp³) Coupling
 α-Functionalized alkyl halides • 50 Examples Late-stage derivatizations

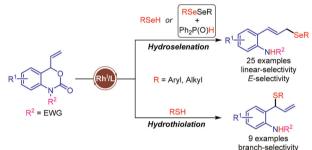
#### 3594

# RAG = RAG = Remote Activating Group

### Selective benzylic cross-dehydrogenative arylation and $\alpha,\beta$ -dehydrogenation under mild conditions

Zhenyang Wan, Jiahao Gu, Yuhong Lu, Xiangmin Tian, Ziyue Zeng, Yichuan Yan, Xinyao Li,\* Dailin Zhuang\* and Ziyuan Li\*

#### 3606



## Rhodium-catalyzed regioselective decarboxylative hydroselenation and hydrothiolation of vinyl benzoxazinanones

Yuan-Yi Lu, Guirong You, Yu Teng, Jun Zhao, Yi-Dong Zhong\* and Hong-Shuang Li\*

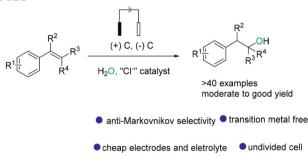
#### 3614



# Pd-catalyzed arylative annulation of alkynyl nitriles with boronic acids to functionalized cyclopenten-3-ones/2-indenones

Chada Raji Reddy,\* Banoth Subhash and Veeramalla Ganesh

#### 3620



### Metal-free electrochemical anti-markovnikov hydration of aryl alkenes

Rongxing Linghu, Jun Shi, Biaobiao Jiang, Junrong Song, Wei Wu\* and Hai Ren\*

#### 3626

#### Carbazol-3-olate photosensitizers enable photocatalytic hydrodefluorination and Birch-type reduction reactions

Huilong Kuang, Weibin Xie,\* Tatsushi Yabuta. Masaaki Fuki, Masahiro Higashi, Yasuhiro Kobori,\* Nozomi Sakai, Seiji Akimoto, Masahiko Hayashi and Rvosuke Matsubara\*

#### 3636

#### Copper-photocatalyzed atom transfer radical addition of thiosulfonates to alkenes

Ben Ma,\* Zheng Zhao, Min Ma, Rui Zhang and Jingya Yang\*

#### 3643

Asymmetric construction of enantioenriched spiro gem-diamines via [3 + 3] annulation of  $\alpha,\beta$ -unsaturated N-sulfonyl ketimines and 3-aminobenzofurans

Xin Shu, Tingting Zhang, Yongxing Zhang, Kexin Tong, Shumin Wang and Yang Wang\*

- Broad substrate scope and high yields
- Excellent diastereoselectivities and enantioselectivities

up to 99% yield up to 99% ee

#### 3649

#### Discovery of zinc-bound dithiolates for C(sp<sup>3</sup>)-S couplings of alkyl iodides: a radical solution to nucleophilic substitution

Yanchuang Zhao, Yuenian Xu, Han Qian, Aman Ullah, Shao-Fei Ni,\* Ying Bai and Xinxin Shao\*

#### new reagents and radical solution to nucleophilic substitution ArN<sub>2</sub>BF<sub>4</sub> ChR ChR **DMSO** `ChR 22 °C, 1 h Ch = S, Se air and moisture column-free synthesis stability >70 examples, up to >99% yield excellent chemo-selectivity

#### 3658



# Highly chemo- and site-selective C(sp<sup>2</sup>)-H bond functionalization of aniline and phenol derivatives with aryl/aryl diazo compounds

Yuzhu Wang, Xiaoyan Wei, Yinuo Chen, Yueyue Liu and Lu Liu\*

# 3665 MeO (5R, 6R, 7R, 8R) Proposed structure O (5S, 6S, 7R, 8S) Revised structure

#### Gonioheptenolactone

(significant cytotoxicities against a panel of human cancer cells)

## Total synthesis and structure revision of gonioheptenolactone

Jun Liu,\* Jingjing Bi, Yuxin Cui, Minhao Chen, Chuanfang Zhao, Wenting Li, Aishuang Zhan and Yuquo Du

# Surface display SD-VHb Whole cell catalysts for C-H insertion Design of whole cell catalysts and photo-enzymatic method for the asymmetry C-H insertion Br HN Photo-enzymatic cascade reaction Green solvents & Step-economical Whole cell catalyst

## Enantioselective synthesis of $\alpha$ -functionalized phenylpyrrolidine $\emph{via}$ photo-enzymatic cascade multi-component reaction

Fengxi Li, Shenhan Xie, Wenxian Dong, Yihang Dai, Qikai Sun, Zhengqiang Li, Chuang Du,\* Zhi Wang\* and Lei Wang\*

### Fragmentation of glucosylphosphonium ylides for the synthesis of glycals

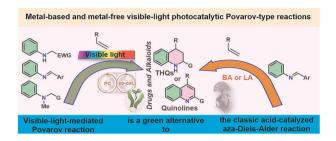
Chao Chen, Zhichao Mei, Mengyao You, Ziwei Zhang, Haiyang Huang\* and Qiang Xiao\*

#### **REVIEWS**

#### 3687

Achievements in photocatalytic Povarov-type reactions: a key step in green diversification of the quinoline chemical space

Vladimir V. Kouznetsov\* and Fedor I. Zubkov



#### 3725

#### Recent advances in the diverse transformations of trifluoromethyl alkenes

Fei Liu, Qi Wu, Xin Wang,\* Qinghao Dong and Kai Sun\*

