# **ORGANIC** CHEMISTRY

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### Cover

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

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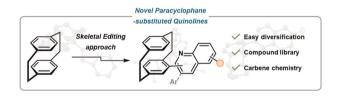
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# **RESEARCH ARTICLES**

# 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\*

O R 
$$\stackrel{\bullet}{N}$$
  $\stackrel{\bullet}{N}$   $\stackrel{\bullet}{N}$ 

- 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  $R = H \text{ or } alkyl$ 

• 50 Examples Late-stage derivatizations

# 

RAG =

p-TsOH (cat.)

**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\*

# RSeH or RSeSeR + Ph<sub>2</sub>P(O)H + P

# 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\*

# 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

# 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 Ryosuke 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\*

- Enticient protocorror enantioenfiched spiro geni-diamines
- Broad substrate scope and high yields
- Excellent diastereoselectivities and enantioselectivities

29 examples up to 99% yield up to 99% ee > 19:1 dr

### 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\*

# halo + ChR ChR DMSO 22 °C, 1 h Ch = S, Se enhanced air and moisture stability 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 5 8 HO OH HO OH (5R, 6R, 7R, 8R) Proposed structure (5S, 6S, 7R, 8S) Revised structure

# Gonioheptenolactone

(significant cytotoxicities against a panel of human cancer cells)

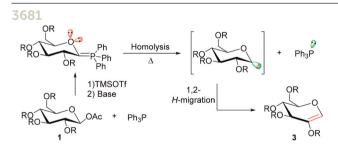
# Total synthesis and structure revision of gonioheptenolactone

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 | Photo-enzymatic cascade reaction | 20 entries, up to 99% ee | | 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

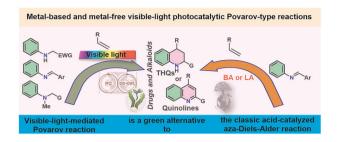
Chao Chen, Zhichao Mei, Mengyao You, Ziwei Zhang, Haiyang Huang\* and Qiang Xiao\*

# **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\*

