Abstracts

Thieme Organic Chemistry

2025

Thieme

Publish with us!

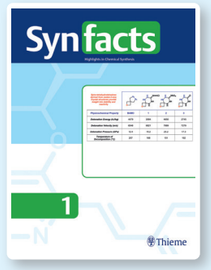
Thieme提供涵盖有机合成、催化、有机材料、药物研发以及循环化学等领域的精选内容。我们的国际产品组合包括化学、药学及药物科学领域的期刊以及在线数据库。

Thieme化学期刊 *thieme-chemistry.com*

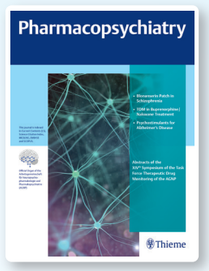
影响因子2024: 2.3

影响因子2024: 1.4

影响因子2024: 2.1



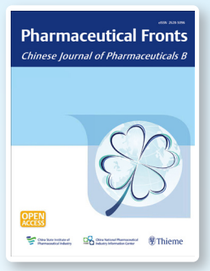
Thieme药学期刊 *lp.thieme.de/journals/pharmacology*



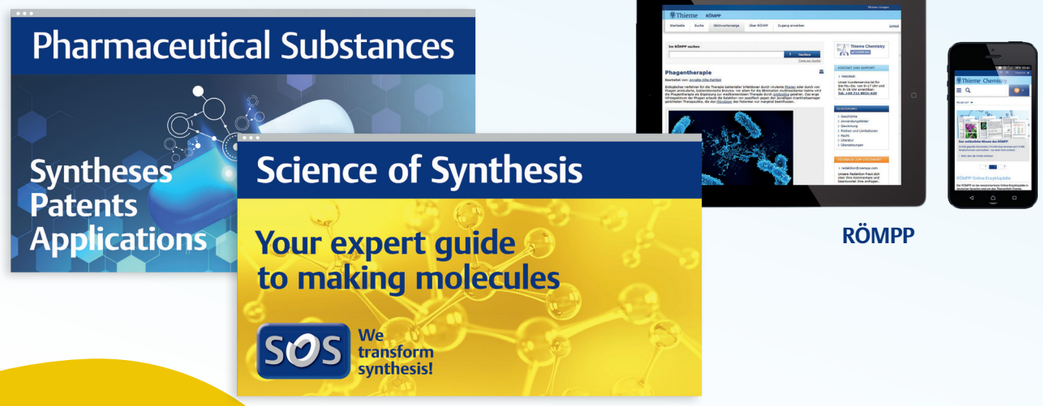
影响因子2024: 2.2

影响因子2024: 2.1

影响因子2024: 2.0



Online Access to over 2,700 APIs



RÖMPP

马上申请试用！

sos.thieme.com

Select Crowd Review:
Fast, Interactive, Modern

群体同行评审：快速、互动和公正的评审模式

Select Crowd Review 由诺贝尔化学奖得主 *Benjamin List* 教授创造性提出，并在 *Synlett* 上首先施行。
目前提供该审稿模式选择的期刊包括：

Synlett | Synthesis | SynOpen | Sustainability & Circularity NOW

Select Crowd Review 让审稿周期大幅缩短，更加快速且公正。

- 主编精选70-100名专家组成群体评审小组，稿件通过安全的评审平台发给群体评审小组进行匿名评审；
- 每位评审人根据自己的时间和专长决定是否参与论文评审，群体评审成员可相互看到评论并讨论，进而为作者提供更有价值的反馈；
- 平均48-72小时，主编即可在评估评审意见后做出最终决定。
- Thieme已经拥有7年的成功经验。

现在就提交稿件并尝试 *Select Crowd Review* 吧！
www.thieme-chemistry.com/crowdreview

SCAN ME!

PROFESSOR

Xi-Sheng Wang

Department of Chemistry, University of Science and Technology of China, Hefei, China
Department of Chemistry, Guizhou University, Hefei, China

Xi-Sheng Wang received his Ph.D. in 2005 under the direction of Professor Kuiling Ding at Shanghai Institute of Organic Chemistry in China. After postdoctoral studies with Professor Keiji Maruoka (2005–2008) at Kyoto University in Japan and with Professor Jin-Quan Yu (2008–2011) at the Scripps Research Institute in USA, he became a full professor in the School of Chemistry and Materials Science at University of Science and Technology of China in 2011. In 2025, he moved to Guizhou University as a distinguished professor. His research interests include organofluorine chemistry, organoradical chemistry and activation of inert bonds.

Lab webpage:
http://staff.ustc.edu.cn/~xswang77/index.html

Fluorine-effect-enabled Reductive Fluoroalkylation

Xi-Sheng Wang
Department of Chemistry, University of Science and Technology of China, Hefei, China
Department of Chemistry, Guizhou University, Hefei, China
**xswang77@ustc.edu.cn; xswang@gzu.edu.cn*

The incorporation of fluorine atom(s) into organic molecules could dramatically change the physical, chemical and biological properties of parent molecules, and thus the fluorine-containing compounds have been widely used in pharmaceuticals, agrochemicals and special materials. [1] The development of efficient and selective synthetic methods to construct fluorinated compounds is always one of the key goals of organofluorine chemistry. To address the issues on substrate scope and reaction generality for synthesis of fluorinated alkanes, our strategy is to offer a solution via strategical cleavage of C-C bond, in which diverse fluorine-containing compounds could be synthesized via efficient and selective construction of C-C bond based on nickel-catalyzed reductive cross-coupling fluoroalkylation with readily available fluoroalkyl halides enabled by fluorine effect of F or CF3.[2] These newly established synthetic methods were further successfully applied to diverse late-state fluorine-containing modification of various biologically active complex molecules.

Keywords: reductive fluoroalkylation, fluorine-effect, nickel catalysis, fluorinated compounds

References

[1] a) Müller, K.; Faeh, C.; Diederich, F.* *Science* **2007,** *317,* 1881; b) O'Hagan, D.* *Chem. Soc. Rev.* **2008,** *37,* 308; c) Purser, S.; Moore, P. R.; Swallowb, S.; Gouverneur, V.* *Chem. Soc. Rev.* **2008,** *37,* 320; d) Wang, J.; Sanchez-Rosello, M.; Acena, J. L.; Pozo, C. del; Sorochinsky, A. E.; Fustero, S.*; Soloshonok, V. A.*; Liu, H.* *Chem. Rev.* **2014,** *114,* 2432; e) Champagne, P. A.; Desroches, J.; Hamel, J.-D.; Vandamme, M.; Paquin, J.-F.* *Chem. Rev.* **2015,** *115,* 9073; f) Ni, C.; Hu, J.* *Chem. Soc. Rev.* **2016,** *45,* 5441.
[2] a) Sheng, J.; Ni, H.-Q.; Ni, S.-X.; He, Y.; Cui, R.; Liao, G.-X.; Bian, K.-J.; Wu, B.-B.; Wang, X.-S.* *Angew. Chem. Int. Ed.* **2021,** *60,* 15020; b) Sheng, J.; Ni, H.-Q.; Zhang, H.-R.; Zhang, K.-F.; Wang, Y.-N.; Wang, X.-S.* *Angew. Chem. Int. Ed.* **2018,** *57,* 7634; c) Wu, B.-B.; Xu, J.; Gao, Q.; Bian, K.-J.; Liu, G.-K.*; Wang, X.-S.* *Angew. Chem. Int. Ed.* **2022,** *61,* e202208938; d) Min, Y.; Sheng, J.; Yu, J.-L.; Ni, S.-X.; He, Y.; Ma, G.; Gong, H.; Wang, X.-S.* *Angew. Chem. Int. Ed.* **2021,** *60,* 9941; e) Wu, B.-B.; Xu, J.; Bian, K.-J.; Gao, Q.; Wang, X.-S.* *J. Am. Chem. Soc.* **2022,** *144,* 6543; f) Jin, R.-X.; Wu, B.-B.; Bian, K.-J.; Yu, J.-L.; Dai, J.-C.; Zuo, Y.-W.; Zhang, Y.-F.; Wang, X.-S.* *Nat. Commun.* **2022**, *13,* 7035; g) Unpublished results.

PROFESSOR

Tanja Gulder

Institute of Organic Chemistry, Saarland University
Saarbruecken, Germany

Helmholtz Institute for Pharmaceutical Research Saarland (HIPS)
Helmholtz Centre for Infection Research (HZI)
Saarbruecken, Germany

T.G. graduated from the University of Wuerzburg in 2008 and conducted her postdoctoral research with Prof. Baran at TSRI from 2008-2010. She began her independent career in 2011 at RWTH Aachen with a Liebig Fellowship, then moved to TU Munich as an Emmy-Noether fellow in 2014, and was appointed a Heisenberg Professor in 2018. From 2020 to 2024, she was a Full Professor at Leipzig University. She then joined Saarland University and the Helmholtz Institute for Pharmaceutical Research Saarland (HIPS) as a Full Professor in 2023. Her research focuses on biomimetic catalysis, including halogenations, deuterations, and C-C bond formations, with applications in the synthesis of natural products, anti-infectives, and diagnostics.

Lab webpage:
https://www.uni-saarland.de/lehrstuhl/gulder.html

Halogen Atoms as Directing Tools: From Reactivity to Bioactive Compounds

Tanja Gulder
Institute of Organic Chemistry, Saarland University, 66123 Saarbruecken, Germany
Helmholtz Institute for Pharmaceutical Research Saarland (HIPS), Helmholtz Centre for Infection Research (HZI), 66123 Saarbruecken, Germany
tanja.gulder@uni-saarland.de

Nature harnesses the beneficial properties of carbon-halogen (C-X) bonds and utilizes them as a strategic tool for assembling structurally complex frameworks.[1] Likewise, installing a halogen atom in organic synthesis opens further transformations, particularly carbon-carbon (C,C) forming reactions. By harnessing the concept of cryptic halogenations using hypervalent iodane chemistry, electrochemistry, photocatalysis or combining enzyme and chemocatalysis, efficient multi-step sequences can be performed straightforwardly.[2] In addition, our group utilizes fluorinated Lewis acid-Lewis base cooperative effects, thus steering transformations, such as terpene cyclizations, and activating strong bonds, e.g., for hydrogen isotope exchange, by creating dynamic and catalytically active supramolecular assemblies in solution.[3] These strategies help push the boundaries of chemical space, granting access to a rich diversity of novel chemical structures that often cannot be approached by our current standard method repertoire.

Keywords: halogenations, biocatalysis, photocatalysis, hypervalent iodines, deuterations

References

[1] a) P. Zeides, K. Bellmann-Sickert, R. Zhang, C. J. Seel, V. Most, C. T. Schoeder, M. Groll, T. Gulder, *Nat. Commun.* **2025,** *16,* 2083R. b) P. M. D'Agostino, C. J. Seel, X. Ji, T. Gulder, T. A. M. Gulder, *Nat. Chem. Biol.* **2022,** *18,* 652-658.
[2] a) A. Andries-Ulmer, C. Brunner, J. Rehbein, T. Gulder, *J. Am. Chem. Soc.* **2018,** *140,* 13034; b) G. M. Kiefl, T. Gulder, *J. Am. Chem. Soc.* **2020,** *142,* 20577; c) M. Kretzschmar, T. Gulder, *Synlett* **2023,** *34,* 405; d) A. M. Arnold, J. Binder, M. Kretzschmar, T. Gulder, *Synlett* **2024,** *35,* 1001.
[3] a) A. M. Arnold, P. Dullinger, A. Biswas, C. Jandl, D. Horinek, T. Gulder, *Nat. Commun.* **2023,** *14,* 813; b) Y. Ni, J. Lebelt, M. Barp, F. Kreuter, J. Jin, H. Buttkus, M. Kretzschmar, R. Tonner-Zech, K. R. Asmis, T. Gulder, *Angew. Chem. Int. Ed.* **2025,** e202417889.

PROFESSOR

Liu Chao

Nanjing University, China

Dr. Chao Liu is now a professor at Nanjing University. He obtained his B.Sc. and Ph.D. at Wuhan University under the supervision of Prof. Aiwen Lei. Since his independent career, Prof. Liu has focused on isotopic organoboron chemistry. He has been selected for prestigious grants such as the NSFC's Excellent Young Scientists Fund, the Jiangsu Outstanding Youth Fund and the Young Elite Scientist Sponsorship Program by CAST. He has received the China Catalysis Rising Star Award, the Thieme Chemistry Journals Award, and the ACP Lectureship Awards. Additionally, Prof. Liu has also been selected as the 'Boron Representative' of the periodic table of CCS young chemists.

Lab webpage:
www.x-mol.com/groups/Liu_Chao-group

Isotopic Organoboron Chemistry

Liu Chao
Nanjing University, China
chao.liu@nju.edu.cn

The introduction of boron into organic chemistry has significantly enhanced chemists' ability to precisely synthesize and create new molecules. This makes the study of simple organic molecule borylation and the in-depth development of boron reagent applications highly significant. Our group has been dedicated to the systematic study of isotopic organoboron chemistry, specifically focusing on: 1) Leveraging the important application value of boron-10 in BNCT technology and carbon-13 in tracer studies, we have developed isotopic reagents such as diboron-10 and carbon-13 gem-diboron reagents. 2) By utilizing readily available C1-functionalized carbonyl compounds (aldehydes, ketones, esters) and polyhalomethanes as platform molecules for borylation reactions, we have successfully synthesized structurally diverse organoboron reagents; 3) Developing novel application strategies for boron reagents. Using the synthesized series of organoborons, we further explore functional applications and develop new reagents and methods for carbon-boron bond transformation.

Keywords: BNCT, Isotope, Boron chemistry, gem-diborylalkanes

References

[1] Fang, T.; Ren, B.; Liu, C.* *Acc. Chem. Res.* **2025,** *58*, 2511.
[2] Fang, T.; Zhang, P.*; Liu, C.* *Angew. Chem. Int. Ed.* **2025,** *64,* e202415301.
[3] Liu, H.; Zhang, X.; Chen, D.; Su, Y.*; Zhang, P.*; Qi, X.*; Liu, C.* *Angew. Chem. Int. Ed.* **2025,** *64,* e202514261.
[4] Xu, L.; Chen, D.; Zhang, P.*; Xia, C.*; Liu, C.* *Chem* **2024,** *10,* 3474.
[5] Fang, T.; Wang, L.; Wu, M.; Qi, X.*; Liu, C.* *Angew. Chem. Int. Ed.* **2024,** *63,* e202315227.
[6] Sun, W.; Xu, L.; Qin, Y.; Liu, C.*, *Nat. Synth.* **2023,** *2,* 413.
[7] Chen, D.; Xu, L.; Wang, Z.; Liu, C.*, *Chem* **2023,** *9,* 3212.
[8] Sun, W.; Wang, L.; Hu, Y.; Wu, X.; Xia, C.; Liu, C.* *Nat. Commun.* **2020,** *11,* 3113.
[9] Hu, Y.; Sun, W.; Zhang, T.; Xu, N.; Xu, J.; Lan, Y.; Liu, C.* *Angew. Chem. Int. Ed.* **2019,** *58,* 15813.
[10] Wang, L.; Zhang, T.; Sun, W.; He, Z.; Xia, C.; Lan, Y.*; Liu, C.* *J. Am. Chem. Soc.* **2017,** *139,* 5257.

PROFESSOR

Martin Oestreich

Institut für Chemie, Technische Universität Berlin
Berlin, Germany

Martin Oestreich was born in 1971 in Pforzheim, Germany. He is Professor of Synthesis & Catalysis at the Technische Universität Berlin. He received his diploma degree with Paul Knochel (Marburg, 1996) and his doctoral degree with Dieter Hoppe (Münster, 1999). After a two-year postdoctoral stint with Larry E. Overman (Irvine, 1999–2001), he completed his habilitation with Reinhard Brückner (Freiburg, 2001–2005) and was appointed as Professor of Organic Chemistry at the Westfälische Wilhelms-Universität Münster (2006–2011). He also held visiting positions at Cardiff University in Wales (2005), at The Australian National University in Canberra (2010), and at Kyoto University (2018).

Lab webpage:
https://www.tu.berlin/en/organometallics

The Cation Shuffle

Martin Oestreich
Institut für Chemie, Technische Universität Berlin, 10623 Berlin, Germany
martin.oestreich@tu-berlin.de

The talk tells our silylium-ion story,[1] eventually leading to a protolysis strategy [2] that enables the on-demand interconversion of various cationic (highly) reactive intermediates.[3] Examples of how to apply this technique in catalysis will be shown.[4–10]

Keywords: Brønsted acids, catalysis, Lewis acids, reactive intermediates, silicon

References

[1] Review: Klare, H. F. T.; Albers, L.; Süsse, L.; Keess, S.; Müller, T.; Oestreich, M. *Chem. Rev.* **2021,** *121,* 5889–5985.
[2] Wu, Q.; Irran, E.; Müller, R.; Kaupp, M.; Klare, H. F. T.; Oestreich, M. *Science* **2019,** *365,* 168–172.
[3] Perspective: Klare, H. F. T.; Oestreich, M., *J. Am. Chem. Soc.* **2021,** *143,* 15490–15507.
[4] Zuo, H.; Qu, Z.-W.; Kemper, S.; Klare, H. F. T.; Grimme, S.; Oestreich, M. *J. Am. Chem. Soc.* **2024,** *146,* 31377–31383.
[5] Zuo, H.; Kemper, S.; Klare, H. F. T.; Oestreich, M. *J. Am. Chem. Soc.* **2025,** *147,* 5426–5431.
[6] He, T.; Klare, H. F. T.; Oestreich, M. *J. Am. Chem. Soc.* **2023,** *145,* 3795–3801.
[7] He, T.; Klare, H. F. T.; Oestreich, M. *Nature* **2023,** *623,* 538–543.
[8] Randt, T.; He, T.; Klare, H. F. T.; Oestreich, M. *Synthesis* **2024,** *56,* 3054–3062.
[9] Randt, T.; Lehmann, M.; Irran, E.; Kaupp, M.; Klare, H. F. T.; Oestreich, M. *Nat. Chem.* **2025,** *17,* 1666–1672.
[10] He, T.; Klare, H. F. T.; Oestreich, M. *J. Am. Chem. Soc.* **2022,** *144,* 4734–4738.

PROFESSOR

Jia-Rong Chen

College of Chemistry, Central China Normal University
Wuhan, Hubei 430079, China
Wuhan Institute of Photochemistry and Technology
Wuhan, Hubei 430083, China

Career

2016.7-present, Full Professor, College of Chemistry, Central China Normal University, China.
2011.7-2016.6, Associate Professor, Professor, College of Chemistry, Central China Normal University, China.
2009.7-2011.6, Assistant Professor, College of Chemistry, Central China Normal University, China.
2010.11-2012.1, Postdoc Fellow, RWTH Aachen University, Germany (Advisor: Prof. Carsten Bolm).
2008.4-2009.4, Visiting Scholar, GlaxoSmithKline, Collegeville, Pennsylvania, USA (Advisor: James B. Hoffman).

Education

2003-2009, Ph. D., Central China Normal University (Advisor: Prof. Wen-Jing Xiao).
1999-2003, B. S., Central China Agricultural University (Advisor: Prof. Xianwen Hu).

Lab webpage:
https://chem-xiao.ccnu.edu.cn/Biography/Prof__Dr__Jiarong_Chen.htm

Photoredox and Copper-Catalyzed Controllable Generation and Transformation of Radical Anions

Jia-Rong Chen
College of Chemistry, Central China Normal University, Wuhan, Hubei 430079, China
Wuhan Institute of Photochemistry and Technology, Wuhan, Hubei 430083, China
chenjiarong@mail.ccnu.edu.cn

Radical anions, which possess both the properties of radicals and anions, are an important type of intermediate in organic synthesis transformations.[1] However, the common methods for generating such reactive intermediates often require relatively harsh conditions, leading to difficulties in controlling the reactivity and limited functional group compatibility. In recent years, with the development of photoredox catalysis and transition metal catalysis,[2] the chemistry of radical anions has ushered in new opportunities. Building on our previous work in photocatalysis and copper catalysis,[3] we have developed a synergistic mode of photoredox and copper catalysis for controllable generation and efficient transformations of radical anions, including asymmetric cynanofunctionalization of alkenes, hydroalkynylation and hydroarylation of alkenes, and hydrofunctionalization of epoxides.[4]

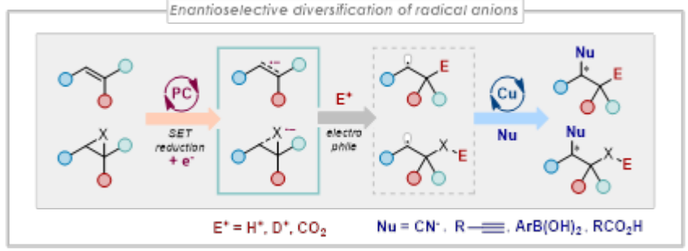


Fig. 1 Enantioselective diversification of radical anions

References

[1] (a) Li, X.; Tu, Y.-L.; Chen, X.-Y. *Eur. J. Org. Chem.* **2024,** *27,* e202301060. (b) Yue, J.-P.; Xu, J.-C.; Luo, H.-T.; Chen, X.-W.; Song, H.-X.; Deng, Y.; Yuan, L.; Ye, J.-H.; Yu, D.-G. *Nat Catal.* **2023,** *6,* 959.
[2] Chan, A. Y.; Perry, I. B.; Bissonnette, N. B.; Buksh, B. F.; Edwards, G. A.; Frye, L. I.; Garry, O. L.; Lavagnino, M. N.; Li, B. X.; Liang, Y.; Mao, E.; Millet, A.; Oakley, J. V.; Reed, N. L.; Sakai, H. A.; Seath, C. P.; MacMillan, D. W. C. *Chem. Rev.* **2022,** *122,* 1485.
[3] Wang, P.-Z.; Xiao, W.-J.; Chen, J.-R. *Nat. Rev. Chem.* **2023,** *7,* 35.
[4] Zhang, B.; Li, T.-T.; Mao, Z.-C.; Jiang, M.; Zhang, Z.-H.; Zhao, K.; Qu, W.-Y.; Xiao, W.-J.; Chen, J.-R. *J. Am. Chem. Soc.* **2024,** *146,* 1410.

PROFESSOR

Irene Izzo

Dipartimento di Chimica e Biologia “Adolfo Zambelli”/DCB
University of Salerno

Irene Izzo received in 1994 a Magna Cum Laude degree in Chemistry from the University of Salerno where in the same year she began her PhD courses. She received her doctoral degree in Chemistry in 1998 from the University of Salerno. (Title of the thesis: "Synthesis of Biologically Active Marine Steroids and Cholestane Analogs. Thesis supervisor: prof. Guido Sodano). In 1998 she received a post-doctoral fellowship, working at University "Louis Pasteur" of Strasbourg (France) in the Laboratoire de Stéréochimie (E.C.P.M.), tutored by prof. Guy Solladié. From November 1999 to February 2006, she worked as assistant professor at the Department of Chemistry of the Faculty of Sciences of the University of Salerno. Since March 2007 she is Associate Professor at the Department of Chemistry and Biology “A. Zambelli” of the University of Salerno. From June 2008 to February 2009, she was a visiting scientist at Institute for Research in Biomedicine of Barcelona in the group of prof. Fernando Albericio. Since the academic year 2013-2014 she has been teaching in the second year of the “Chemistry and BioTechnology” (ChemBioTech Master) at the University of Strasbourg, organized by the École européenne de chimie, polymères et matériaux (ECPM) and the Strasbourg School for Biotechnology (ESBS). Since 2014 she has been the Internationalization Delegate and since 2022 the Equal Opportunities Delegate for the Department. In 2023 she became Associate Editor of SynOpen (Thieme). In November 2025, the Rector of University of Salerno appointed her as his Delegate for relations with the ADISURC (Campania Region University Education Agency). Her field of research is the total synthesis and semisynthesis of bioactive natural products (marine steroids and cyclopeptides mainly), and their analogues. She is also involved in the synthesis of artificial ion channels and more recently in the synthesis of peptidomimetics, in particular cyclic peptoids, oligomers of Nsubstituted glycine. She is author of 100 articles, 4 book chapters and more than 100 communications to national and international congresses.

Lab webpage:
https://docenti.unisa.it/004256/home

Cyclic Peptoids: from Structure to Properties

Irene Izzo
Dipartimento di Chimica e Biologia “A.Zambelli” Università degli Studi di Salerno
Via Giovanni Paolo II, 132- 84084 Fisciano (Salerno), Italia
iizzo@unisa.it

Macrocyclic compounds are highly effective tools in the field of supramolecular chemistry, with applications in numerous areas of research. An interesting, biologically-inspired subset of these are cyclic peptoids, which are macrocyclic oligomers of N-substituted glycines.[1] These peptidomimetics have demonstrated notable structural and physical characteristics, as well as significant promise as molecules capable of binding guests.[1][2]

A key benefit of this group of compounds is their modular nature, which facilitates the straightforward creation of extensive libraries of derivatives by altering the decorations on the backbone or the size of the ring. [2] In fact, cyclic peptoids with different cavity sizes have shown a remarkable capacity for binding cations. [2] [3] We have discovered a wide range of applications for these compounds in recent years across diverse fields, including material chemistry[4] and catalysis.[5] They have also been employed as agents with biological activity[6] and as starting molecules for new azamacrocycles.[7]

More recently, we have pioneered a novel category of macrocycles that incorporates a triazole spacer within the backbone.[8] This presentation will outline the synthesis, characterization, properties, and applications of this adaptable class of macrocyclic compounds.

Keywords: peptidomimetics, macrocycles, ionophores, organocatalysis, multivalency

References

[1] De Riccardis, F. *Eur. J. Org. Chem.* **2020,** 2981-2994.
[2] Maulucci, N.; Izzo, I.; Bifulco, G.; Aliberti, A. De Cola, C.; Comegna, D.; Gaeta, C.; Napolitano, A.; Pizza, C.; Tedesco, C.; Flot, D.F. De Riccardis, F. *Chem. Commun.* **2008,** 3927-3929.
[3] (a) Izzo, I.; Ianniello, G.; De Cola, C.; Nardone, B.; Erra, L.; Vaughan, G.; Tedesco, C.; De Riccardis, F. *Org. Lett.* **2013,** *15,* 598−601.
[4] Meli, A.; Macedi, E.; De Riccardis, F.; Smith, V. J.; Barbour, L. J.; Izzo, I.; Tedesco, C.; *Angew. Chem. Int. Ed.* **2016,** *55,* 4679-4682.
[5] Schettini, R.; De Riccardis, F.; Della Sala, G.; Izzo I. J. *Org. Chem.* **2016,** *81,* 2494-2505.
[6] Howard, E.; Cousido-Siah, A.; Lepage, M. L.; Schneider, J. P.; Bodlenner, A.; Mitschler, A.; Meli, A.; Izzo, I.; Alvarez, H. A.; Podjarny, A.; Compain, P. *Angew. Chem. Int. Ed.* **2018,** *57,* 8002.
[7] Schettini, R.; D’Amato, A.; Pierri, G.; Tedesco, C.; Della Sala, G.; Motta, O.; Izzo, I.; De Riccardis, F. *Org. Lett.* **2019,** *21,* 7365−7369.
[8] Araszczuk, A. M.; D’Amato, A.; Schettini, R.; Costabile, C.; Della Sala, G.; Pierri, G.; Tedesco, C.; De Riccardis, F.; Izzo, I. *Org. Lett.* **2022,** *24,* 7752−7756; Araszczuk, A. M.; Pierri, G.; Schettini, R.; Costabile, C.; Della Sala, G.; Di Marino, L.; Tedesco, C.; De Riccardis, F.; Izzo, I. *Chem. Eur. J.* **2024,** *30,* e202400904

PROFESSOR

Min Zhang

School of Chemistry and Chemical Engineering, South China University of Technology, Guangzhou 510641, China

From 2003 to 2006, Professor Zhang Min pursued a joint master's training program at Jinan University and the Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences. Between 2006 and 2009, he engaged in a joint doctoral training program at the University of Rennes 1 in France (Prof. Pierre. H. Dixneuf) and South China University of Technology (Prof. Jiang, H. F.), graduating with doctoral degrees from both institutions. Subsequently, he conducted research as an Alexander von Humboldt Fellow and postdoctoral researcher in Germany (Prof. Beller M). In 2014, he began his independent research career at South China University of Technology. Currently, he is primarily engaged in fundamental research in green and sustainable catalytic organic synthesis chemistry, as well as industrial application studies in areas such as resins and cleaning agents.

Lab webpage:
https://www.x-mol.com/groups/minzhang_scut?lang=en

Reduction-specified tandem reactions

Min Zhang
School of Chemistry and Chemical Engineering, South China University of Technology, Guangzhou 510641, China
minzhang@scut.ed.cn

By employing unsaturated nitrogen-containing aromatics as the fundamental feedstocks, our group has been focusing on the utilization of their reductive intermediates to develop new tandem reactions in recent years (Fig. 1), and the develped synthetic methods were further applied for streamline synthesis of functional molecules such as biomedicals, ligands, dyes, polymers, etc. By employing different strategies, the talk will present precise in situ interception of single reductive intermediates among multiple ones to develop tandem reactions involving both C–C and C–N bond formations. The contents will cover the following two sections: (1) Reductive functionalization of N-heteroarenes.[1] (2) Reductive tandem reactions for direct and diverse construction of functional N-containing molecules.[2]

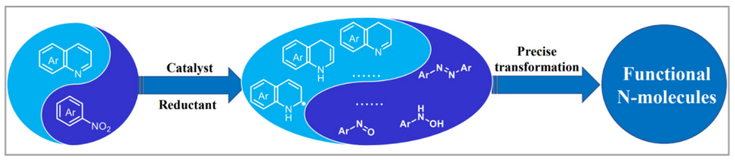


Figure 1. Reduction-specified tandem reactions

Keywords: Tandem reactions, controllable reduction, functional N-molecules, step and atom economy

References

[1] Selected examples: (a) Jia, H. H.; Tan, Z. D.; Zhang, M*. *Acc. Chem. Res.* **2024,** *57,* 795-813. (b) Cao, L.; Zhang, M*.; et al. *Nat. Commun.* **2021,** *12,* 4206. (c) Zhao, H.; Wu, Y.; Zhang, M*.; et al. *Nat. Commun.* **2022,** *13,* 2393. (d) Jia, H. H; Xie, R.; Lu, G. P.; Jiang, H. F.; Zhang, M*. *ACS. Catal.* **2022,** *12,* 10294. (e) Xie, R.; Zhang, M*.; et al. *Chem. Sci.* **2021,** *12,* 13802. (f) Tan, Z. D.; Zhang, M*.; et al. *ACS Catal.* **2020,** *10,* 5243. (g) Yang, J.; Zhao, H.; Tan, Z. D.; Cao, L.; Jiang, H. F.; Ci C. G.; Zhang, M*. *ACS Catal.* **2021,** *11,* 9271. (h) Xie, F.; Zhang, M*.; et al. *ACS. Catal.* **2017,** *7,* 4780. (i) Chen, X. W.; Zhang, M*.; et al. *Angew. Chem. Int. Ed.* **2017,** *56,* 14232. (j) Wang, M. R.; Zhang, C. Q.; Ci, C. G.; Jiang, H. F.; Pierre, H. D.; Zhang, M*. *J. Am. Chem. Soc.* **2023,** *145,* 10967. (k) Wang, M. R.; C. Q. Zhang, H. Zhao, H. F. Jiang, P. H. Dixneuf, Zhang, M*. *CCS Chem.* **2024,** *6,* 342. (l) Yang, J.; Yao, B.; Jiang, H. F.; Ni, S. F.; Zhang, M*. *Angew. Chem. Int. Ed.,* **2025,** *64,* e202505060. (m) Chen, X. Y.; Wang, M. R..; Jiang, H. F.; Dixneuf, P. H. Zhang, M*.*J. Am. Chem. Soc.,* **2025,** *147,* jacs.5c16945.
[2] (a) Hua, H. T., Zhang M.* et al. *J. Am. Chem. Soc.* **2025,** *147,* 6572. (b) Liang, Z. Y.; Zhang, M* et al. *J. Am. Chem. Soc.* **2025,** *147,* jacs.5c18641. (c) Liang, Z. Y.; Zhang, M* et al. *Angew. Chem. Int. Ed.* **2025,** *64,* e202516510. (d) Sun, J. L.; Jiang, H. F.; Dixneuf, P. H.; Zhang, M*. *J. Am. Chem. Soc.* **2023,** *145,* 17329. (e) Sun, J. L.; Jiang, H. F.; Dixneuf, P. H.; Zhang, M*. *J. Am. Chem. Soc.* **2024,** *146,* 11289. (f) Sun, J. L.; Ci, C. G.; Jiang, H. F.; P. H. Dixneuf, Zhang, M*. *Angew. Chem. Int. Ed.* **2023,** e202303007. (g) Jia, H, H.; Liu, W.; Liao, Q.; Jiang, H. F.; Pierre, H. D.; Zhang, M*. *J. Am. Chem. Soc.* **2024,** *146,* 31647.

Synthesis

*Synthesis*是一本专注于合成化学最新科研发展的国际期刊，涵盖涉及到合成有机化学的所有领域，包括催化、金属有机化合物、医学、生物学、光化学以及相关学科。

*Synthesis*为半月刊（每年出版24期），发表的研究成果可靠，配有详细且可靠的实验步骤，并对所有重要新产品提供完整的表征说明。

Synthesis为读者提供以下特色专栏：

Timely Reviews and Short Reviews
对读者感兴趣的特定领域的最新发展进行批判性评估。

Feature Articles
科学界具有特殊高质量和重要意义的论文。

Book Reviews

Practical Synthetic Procedures (PSP)
以紧凑的形式呈现学术和工业化学家感兴趣的有用且可靠的实验程序。

Special Issues and Special Topics
有关有机化学现有领域相关新研究的专题论文集。

欢迎新主编

选择我们的理由

- ☑ 在线稿件提交系统
- ☑ 顶尖专家严格评审
- ☑ 在线快速出版（包括接受稿版本）
- ☑ 高质量编辑服务
- ☑ 所有已发表论文全文在线获取
- ☑ 支持开放获取出版
- ☑ 采用CC BY-NC-ND和/或CC BY知识共享许可协议
- ☑ 全球读者群体
- ☑ 知名检索机构收录
- ☑ 国际化编委会
- ☑ 有机会获评Best Paper Award (所有原创论文均可参评)
- ☑ 支持特刊出版
- ☑ 通过封面报道、Synform专栏或官网新闻推介精选论文
- ☑ 通过社交媒体平台推广学术内容

OPEN ACCESS option available

影响因子2024: 2.3

thieme.com/synthesis

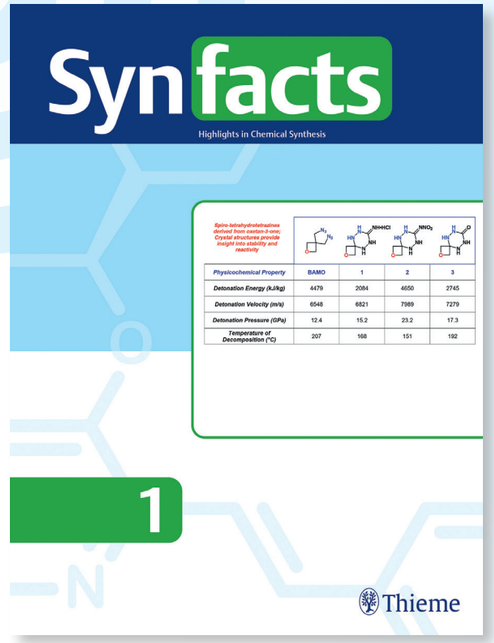
Synfacts

SYNFACTS筛选、评估和总结合成有机化学主要文献的最新研究成果，并由各领域专家辅以个人评述。SYNFACTS旨在每月以简洁的方式向读者呈现合成化学领域最新的重大进展和未来趋势，使从事实践的化学家能够始终站在发展的最前沿。

SYNFACTS服务于学术界（包括学生）和工业界合成化学家的需求，助力读者深入认知自身研究领域，拓展跨学科学术视野，激发创新思路与研究灵感。凭借其高质量的摘要呈现，SYNFACTS也致力于支持和促进教学与考试准备工作。

SYNFACTS为读者提供以下主题领域内最新重要研究成果的专业摘要：

- 天然产物与潜在药物合成
- 杂环化合物合成
- 材料与非天然产物合成
- 金属催化不对称合成与立体选择性反应
- 金属介导合成
- 有机催化和生物催化
- 聚合物支载合成



Synfact Classic — SYNFACT Classic

Synfact of the Month — SYNFACT of the Month

thieme.com/synfacts

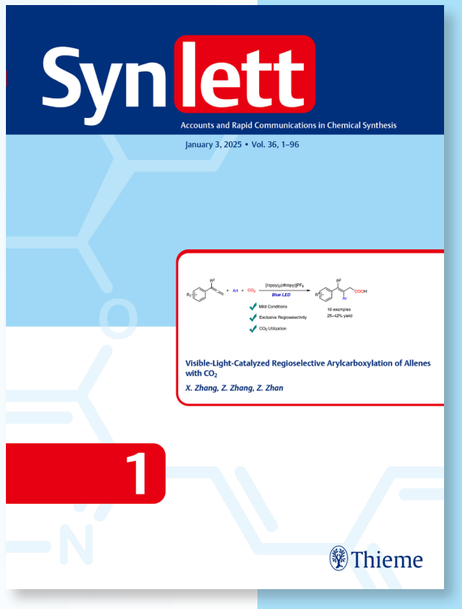
Synlett

*Synlett*是一本国际期刊，以通讯和个人综述的形式报告有机合成化学的研究成果和当前趋势。它涵盖了所有涉及有机合成的科研领域，包括催化、有机金属、医药、生物学和光化学等，同时也可通过本刊发表科学原始数据。

除了质量和数据安全之外，研究成果的发表速度也至关重要。因此，*Synlett*首创并率先提供*Select Crowd Review*审稿模式，极大的缩短了审稿周期，更加快速且公正。

主编
Debabrata Maiti
印度理工学院孟买分校

中国区副主编
李昂
中国科学院上海有机化学研究所



选择我们的理由

- ☑ 在线稿件提交系统
- ☑ 顶尖专家严格评审
- ☑ 公正、快速的 Select Crowd Review 同行评审模式可选
- ☑ 在线快速出版（包括接受稿版本）
- ☑ 高质量编辑服务
- ☑ 所有已发表论文全文在线获取
- ☑ 支持开放获取出版
- ☑ 采用CC BY-NC-ND和/或CC BY知识共享许可协议
- ☑ 全球读者群体
- ☑ 知名检索机构收录
- ☑ 国际化编委会
- ☑ 有机会获评Best Paper Award (所有原创论文均可参评)
- ☑ 支持特刊出版
- ☑ 通过封面报道、Synform专栏或官网新闻推介精选论文
- ☑ 通过社交媒体平台推广学术内容

OPEN ACCESS option available

影响因子2024: 1.4

thieme.com/synlett

SynOpen

*SynOpen*是一本国际性的、采用单盲同行评审的开放获取期刊，以全文、快报和综述形式报道化学科学领域的最新研究成果。*SynOpen*服务于工业界和学术界中广泛的化学研究群体。我们发表涵盖整个化学领域的文章，只要合成或合成方法是研究的重点之一。引用*SynOpen*发表文章的学者来自世界各地，并覆盖多个科学学科领域。

*SynOpen*提供*Select Crowd Review*审稿模式，极大的缩短了审稿周期，更加快速且公正。

主编
Thierry Ollevier
拉瓦尔大学，加拿大

中国区副主编
梅天胜
中国科学院上海有机化学研究所

选择我们的理由

- ☑ 开放获取期刊
- ☑ Select Crowd Review 作为默认的同行评审模式
- ☑ 顶尖专家严格评审
- ☑ 稿件一经接受可在数小时内在线出版
- ☑ 高质量编辑服务
- ☑ 全球读者群体
- ☑ 被主要索引和摘要数据库收录，包括ESCI
- ☑ 国际化编委会
- ☑ 论文类型包括图文综述 (Graphical Reviews)
- ☑ 通过Synform专栏或官网新闻推介精选论文
- ☑ 通过社交媒体平台推广学术内容

OPEN ACCESS

影响因子2024: 2.1

thieme.com/synopen

My Note

Thieme通过全面的奖励计划积极推动学术参与和卓越的研究。我们的学术奖项着重关注年轻研究人员，旨在表彰其早期成就并支持他们的独立研究生涯。

- Thieme–IUPAC Prize (€5,000)
- Thieme Chemistry Journals Award
- Dr. Margaret Faul Women in Chemistry Award sponsored by SoS (€5,000)
- SYNTHESIS/SYNLETT Best Paper Awards (€3,000)
- Thieme Lecture in Organic and Bioorganic Chemistry
- Thieme Poster Prizes

了解更多：www.thieme-chemistry.com/awards

LIVE CHEMINAR

Thieme Cheminar 系列线上研讨会

关于有机化学特定主题的一系列线上研讨会。知名专家将介绍他们的最新研究成果，还可以在会上和他们交流提问。

查看下次线上研讨会并注册：cassyni.com/s/thieme-cheminars

Your Trusted Publisher in the Field of Chemical Synthesis

化学期刊论文、专刊合作、英文合作期刊出版
会议支持及其它相关咨询：
蔡颖潇 博士 - 化学期刊合作编辑
Yingxiao.Cai@thieme.com