Kazuya KANEMOTO
Lecturer

Graduate School of Pharmaceutical Sciences, Tohoku University 6-3 Aoba, Aramaki, Aoba-ku, Sendai 980-8578, Japan
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Education

2015 – 2018	Ph. D. (Engineering) Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental University (Advisor: Prof. Takamitsu Hosoya, Assoc. Prof. Suguru Yoshida)
2009 – 2011	M. Sc. (Engineering) Graduate School of Engineering, Hokkaido University (Advisor: Prof. Norio Miyaura, Assoc. Prof. Yasunori Yamamoto)
2005 – 2009	B. Sc. (Engineering) Faculty of Engineering, Hokkaido University
2011.8 – 10	Visiting student Rice University, Department of Chemistry (Prof. Zachary T. Ball)

Professional Experience

2025.2 – present	Lecturer
2022.3 – 2025.1	Assistant Professor Graduate School of Pharmaceutical Sciences, Tohoku University
2019.4 – 2022.2	Assistant Professor Faculty of Science and Engineering, Chuo University
2018.5 – 2019.3	Assistant Professor Institute of Biomaterials and Bioengineering, Tokyo Medical and Dental University
2011.4 – 2018.4	Researcher Astellas Pharma Inc.

Awards

2025 Special Lectures for Young Generation (Chemical Society of Japan)
2020 Meiji Seika Award in Synthetic Organic Chemistry, Japan
2017 15th IBB Bio Future Research Encouragement Prize

Grants

2024.5 – 2025.2	Tohoku University-AIST Matching Support Program
2024.4 – 2027.3	Kobayashi foundation
2024.4 – 2025.3	The Noguchi Shitagau Research Grant
2023.4 – 2025.3	The Research Foundation for Pharmaceutical Sciences
2023.4 – 2024.3	The NOVARTIS Foundation (Japan) for the Promotion of Science
2022.4 – 2023.3	Takahashi Industrial and Economic Research Foundation
2022.4 – 2024.3	JSPS KAKENHI (Young Scientists)
2022.4 – 2023.3	Uehara memorial Foundation
2021.4 – 2023.3	Meiji Seika Award in Synthetic Organic Chemistry, Japan
2021.4 – 2022.3	Takahashi Industrial and Economic Research Foundation
2021.4 – 2022.3	Tokyo Biochemical Research Foundation
2020.4 – 2022.3	JSPS KAKENHI (Young Scientists)
2020.4 – 2022.3	Kato Memorial Bioscience Foundation
2019.9 – 2021.3	JSPS KAKENHI (Research Activity Start-up)

Original Paper (2025. 2/1)

33 Diazomethyl-λ^3-iodane Meets Aryne: Dipolar Cycloaddition and C-to-N Iodane Shift Leading to Indazolyl-λ^3-iodanes, S. Otsuki, **K. Kanemoto**,* D. C. Martos, E. Kwon, J. Wencel-Delord, N. Yoshikai, *ChemRxiv* (DOI:10.26434/chemrxiv-2024-dn8c5)

32 A versatile entry to unnatural, disulfide-linked amino acids and peptides through the disulfuration of azlactones, M. Iwata, Y. Takami, H. Asanuma, K. Hosono, H. Ohno, N. Yoshikai, **K. Kanemoto,*** *Chem. Sci.* (2025) (DOI: 10.1039/D4SC07187E)

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日経新聞電子版に掲載：https://www.nikkei.com/article/DGXZRSP685963_Y5A120C2000000/
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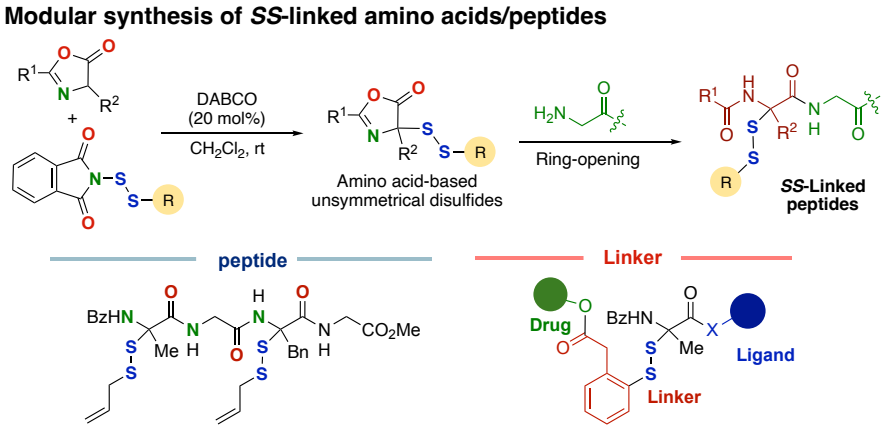
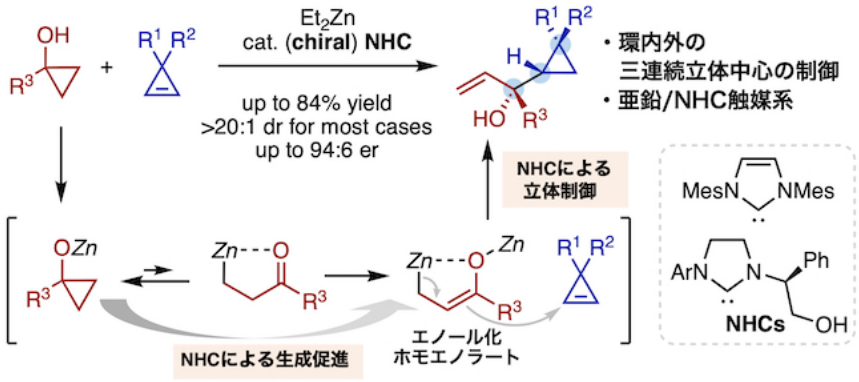
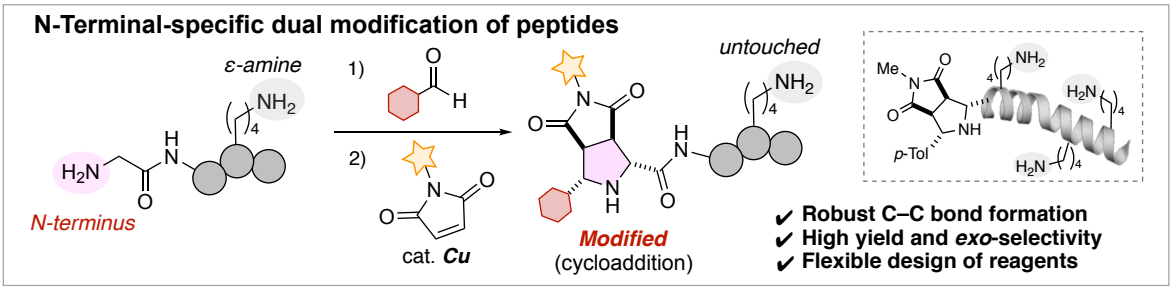


31 Stereoselective Hydroxyallylation of Cyclopropenes with Cyclopropanols via NHC Catalysis of Transient Organozinc Species, K. Tsukiji, A. Matsumoto, K. Kanemoto,* N. Yoshikai,* *Angew. Chem. Int. Ed.* **63**, e202412456 (2024).



プレスリリース：https://www.tohoku.ac.jp/japanese/2024/02/press20240213-02-Peptides.html
Chem-Station スポットライトリサーチに掲載：
https://www.chem-station.com/blog/2024/09/nhc.html

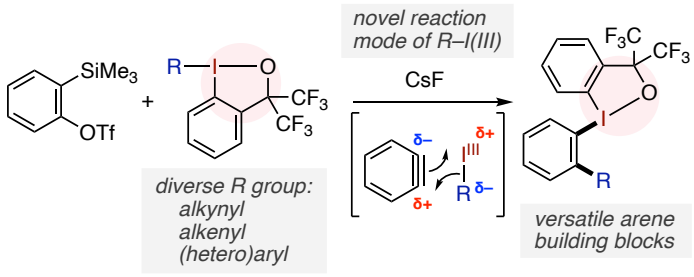
30 N-Terminal-Specific Dual Modification of Peptides through Copper-Catalyzed [3+2] Cycloaddition, H. Machida, K. Kanemoto,* *Angew. Chem. Int. Ed.* **63**, e202320012, (2024).



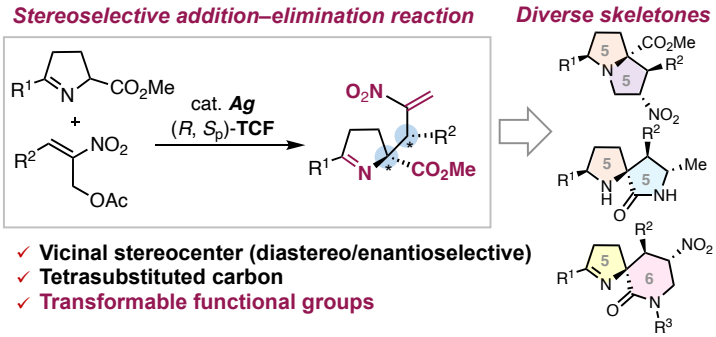
プレスリリース： https://www.tohoku.ac.jp/japanese/2024/02/press20240213-02-Peptides.html
日経新聞： https://www.nikkei.com/article/DGXZRSP668321_T10C24A2000000/

Chem-Station スポットライトリサーチ：
https://www.chem-station.com/blog/2024/03/peptiden.html

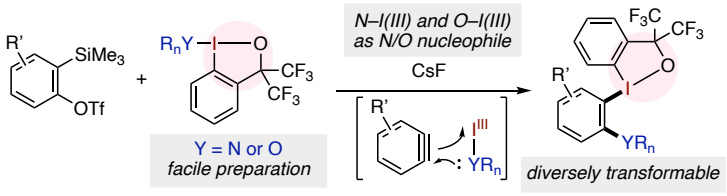
29 Carboiodanation of Arynes: Organoiodine(III) Compounds as Nucleophilic Organometalloids, C. Arakawa,[+] K. Kanemoto,[+] K. Nakai, C. Wang, S. Morohashi, E. Kwon, S. Ito, N. Yoshikai,* *J. Am. Chem. Soc.* **146**, 3910-3919 (2024). [+]Equal contribution.



28 Construction of Diverse Pyrrolidine-Based Skeletons through Ag- Catalyzed Stereoselective Addition–Elimination Reaction of Azomethine Ylides with Nitroallyl Acetates, I. Ohno, K. Kanemoto*, S. Furuya, Y. Suzuki, S.-i. Fukuzawa,* *Org. Lett.* DOI: 10.1021/acs.orglett.4c00184.



27 Amino- and Alkoxybenziodoxoles: Facile Preparation and Use as Arynophiles, K. Kanemoto, K. Yoshimura, K. Ono, W. Ding, S. Ito, N. Yoshikai* *Chem. Eur J.* (2024).



26 Amination of *N*-(Organodithio)phthalimides for the Modular Synthesis of Aminodisulfides, H. Asanuma, K. Kanemoto,* *Org. Lett.* **26**, 438-443, (2024).
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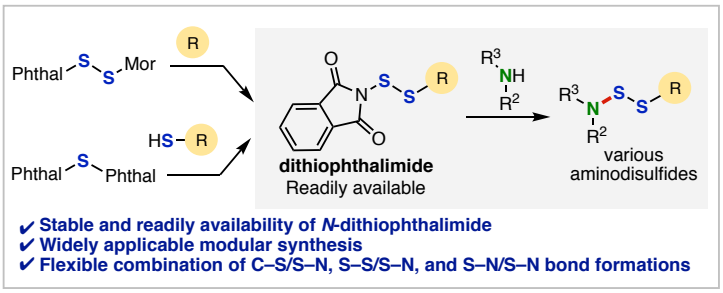
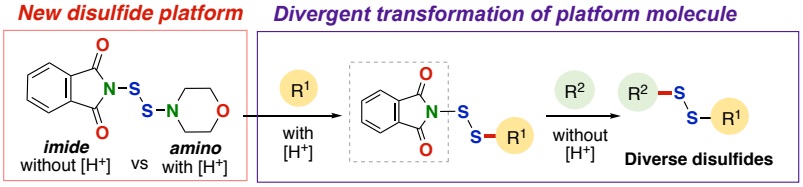


25 Dipolarophile-Steered Formal Stereodivergent Synthesis of 2,5-cis/trans-Pyrrolidines Based on Asymmetric 1,3-Dipolar Cycloaddition of Imino Lactones, S. Furuya, K. Muroi, K. Kanemoto, S.-i. Fukuzawa, *Chem. Eur. J.* e202302609, (2023).

24 Cationic Iridium-Catalyzed Decarboxylation of Aromatic Carboxylic Acids, R. Nonami, Y. Kishino, T. Yamasaki, K. Kanemoto, K. Iwai, N. Nishiwaki, K. Shibatomi, T. Shirai, *Chem. Asian J.* e202300533, (2023).

23 Zinc-Mediated Diastereoselective Annulation of Cyclopropanols with Alkylidenemalononitriles via Enolized Homoenolate, K. Tsukiji, T. Hayakawa, K. Kanemoto, N. Yoshikai,* *Asian J. Org. Chem.* **12**, e202300114, (2023).

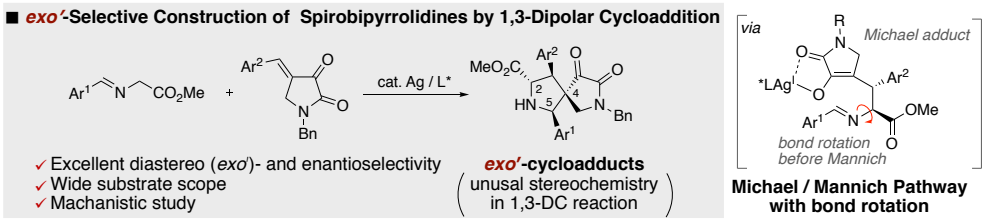
22 N-(Morpholine-4-dithio)phthalimide: A Shelf-Stable, Bilateral Platform Molecule Enabling Access to Diverse Unsymmetrical Disulfides, H. Asanuma, K. Kanemoto,* T. Watanabe, S.-i. Fukuzawa, *Angew. Chem., Int. Ed.* **62**, e202219156, (2023). *Angew. Chem.* **135**, e202219156, (2023).



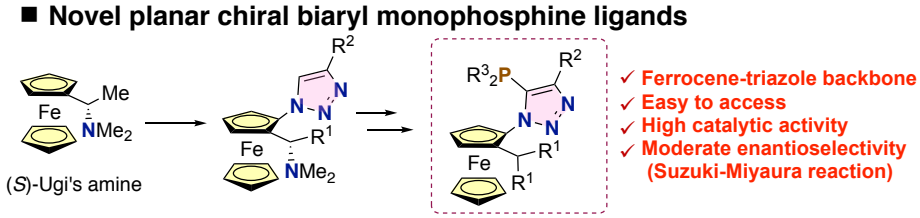
21 Chiral Silver Complex-Catalyzed Asymmetric Conjugate Addition of 1-Pyrroline-5-Carbonitrile to α-Enones, H. Araki, S. Furuya, K. Kanemoto, S.-i. Fukuzawa, *J. org. Chem.* **88**, 924-932, (2023).

20 Diastereoselective Conversion of Cyclopropanols to Cyclopentane-1,3-diols via Aldol Dimerization of Zinc Homoenolates, K. Tsukiji, Y. Sekiguchi, K. Kanemoto, N. Yoshikai, *Chem. Lett.* **51**, 1012-1014, (2022).

19 *exo'*-Selective Construction of Dispiropyrrolidines by the Silver-catalyzed Asymmetric [3+2] Cycloaddition of Imino Esters with 4-Benzylidene-2,3-dioxopyrrolidines, S. Furuya, K. Kanemoto,* S.-i. Fukuzawa,* *Chem. Asian J.* **17**, e202200239, (2022).



18 Synthesis and Evaluation of Novel Planar-Chiral Monophosphine Ligands Bearing Ferrocene-Triazole Backbones, S. Sakai, K. Kanemoto,* S.-i. Fukuzawa,* *Eur. J. Inorg .Chem.*, **6**, e202100967, (2022).

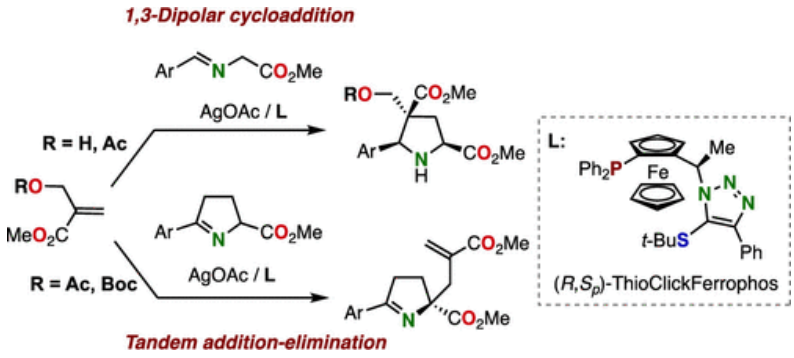


17 Cationic Iridium-Catalyzed Asymmetric Decarbonylative Aryl Addition of Aromatic Aldehydes to Bicyclic Alkenes, R. Nonami, Y. Morimoto, K. Kanemoto, Y. Yamamoto, T. Shirai,* *Chem. Eur. J.*, **28**, e202200317, (2022).
【Selected as supplementary cover】【Selected as hot paper】

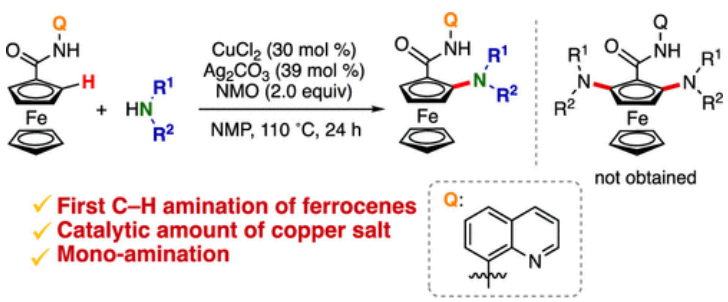
16 Synthesis and properties of 5,5'-diethynyl indigos and their polymers using Glaser coupling reaction, S. Kenmochi, K. Kanemoto, T. Ikeda, S.-i. Fukuzawa, *Fac. Sci. Eng., Chuo Univ.* **27**, 35-46, (2022).

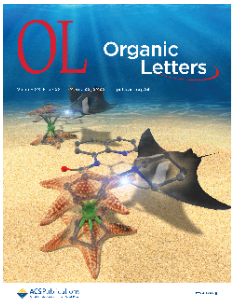
15 Trifluoroacetic Acid-Mediated Desulfurilative Sulfonylation of Activated Olefins Using Potassium *p*-Toluenethiosulfonate, T. Watanebe, K. Kanemoto,* S.-i. Fukuzawa, *Bull. Fac. Sci. Eng., Chuo Univ.*, **27**, 15-33, (2022).

14 Silver/ThioClickFerrophos-Catalyzed 1,3-Dipolar Cycloaddition and Tandem Addition-Elimination Reaction of Morita–Baylis–Hillman Adducts, Y. Suzuki, K. Kanemoto,* A. Inoue, K. Imae, S.-i. Fukuzawa,* *J. Org. Chem.,* **86**, 14586-14596, (2021).



13 Copper-Catalyzed Single C–H Amination of 8-Aminoquinoline-Directed Ferrocenes, K. Kanemoto,* N. Horikawa, S. Hoshino, Y. Tokoro, S.-i. Fukuzawa,* *Org. Lett.*, **23**, 4966–4970, (2021).【Selected as supplementary cover】



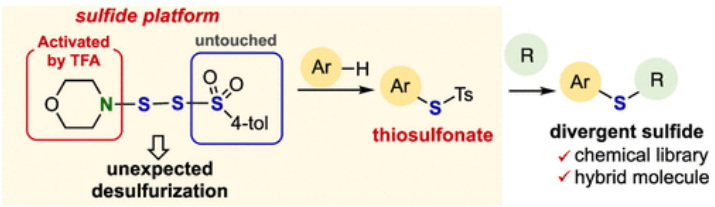


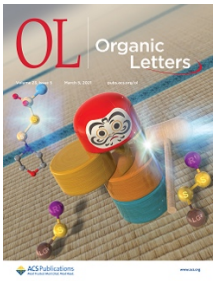
12 Palladium-Catalyzed Sulfinylation of Aryl- and Alkenylborons with Sulfinate Esters, M. Suzuki, K. Kanemoto, Y. Nakamura, T. Hosoya, S. Yoshida,* *Org. Lett.*, **23**, 3793–3797, (2021).

11 Acid-Mediated Sulfonylthiolation of Arenes via Selective Activation of *SS*-Morpholino Dithiosulfonate, K. Kanemoto,* K. Furuhashi, Y. Morita, T. Komatsu, S.-i. Fukuzawa,* *Org. Lett.*, **23**, 1582–1587, (2021).

【 Highlighted in Organic Chemistry Portal (https://www.organic-chemistry.org/abstracts/lit7/808.shtm)】

【Selected as supplementary cover】





10 Copper-Catalyzed Asymmetric 1,3-Dipolar Cycloaddition of Imino Esters to Unsaturated Sultones, S. Furuya, K. Kanemoto,* S.-i. Fukuzawa,* *J. Org. Chem.,* **85**, 8142–8148, (2020).

【Highlighted in Synfacts (H. Yamamoto, T. Hattori, *Synfacts,* **16**, 1118, (2020).)】

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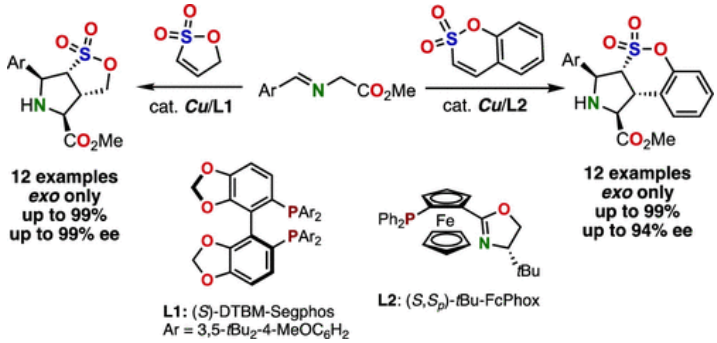
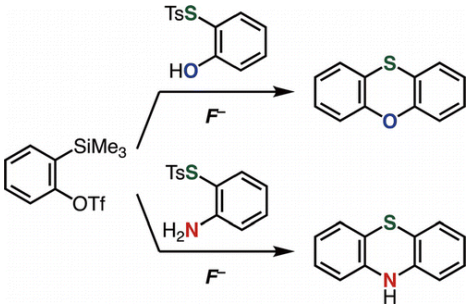


9 Cationic Iridium/Chiral Bisphosphine-Catalyzed Enantioselective Hydroacylation of Ketones, T. Shirai,* T. Iwasaki, K. Kanemoto, Y. Yamamoto, *Chem. Asian J.* **15**, 1858-1862, (2020).

8 Functionalization of a Single C–F Bond of Trifluoromethylarenes Assisted by an *ortho*-Silyl Group Using a Trityl-Based All-in-One Reagent with Ytterbium Triflate Catalyst, Y. Kim, K. Kanemoto, K. Shimomori, T. Hosoya, S. Yoshida,* *Chem. Eur. J.* **26**, 6136-6140, (2020).

7 Synthesis of Phenoxathiins and Phenothiazines by Aryne Reactions with Thiosulfonates, K. Kanemoto, Y. Sakata, T. Hosoya, S. Yoshida,* *Chem. Lett.*, **49**, 593-596, (2020).



6 Synthesis of Alkynyl Sulfides by Copper-Catalyzed Thiolation of Terminal Alkynes Using Thiosulfonates, K. Kanemoto, S. Yoshida,* T. Hosoya,* *Org. Lett.*, **21**, 3172-3177, (2019).

【Press Release (https://www.tmd.ac.jp/archive-tmdu/kouhou/20190423_1.pdf)】

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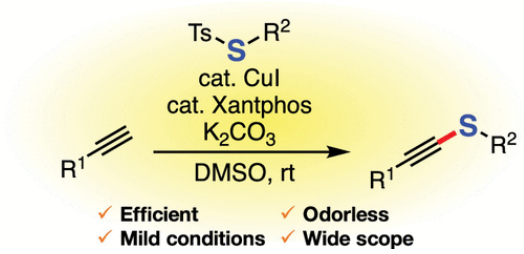
【 Highlighted in Organic Chemistry Portal (https://www.organic-chemistry.org/abstracts/lit6/827.shtm)】

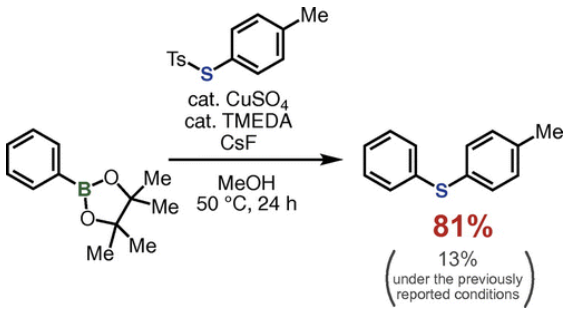


5 Copper-Catalyzed Regio- and Diastereoselective 1,3-Dipolar Cycloaddition Reactions of Glycine Imino Esters with 1-Propene-1,3-sultone, S. Furuya, S. Kato, K. Kanemoto, S.-i. Fukuzawa,* *Eur. J. Org. Chem.* 4561-4565, (2019).

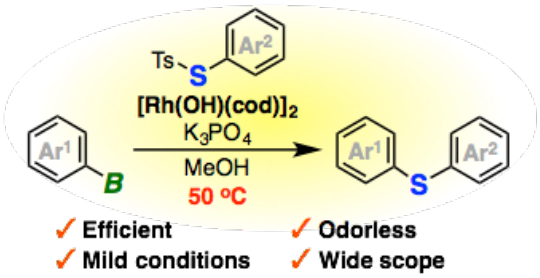
4 Facile Synthesis of Diverse *o*-Iodoaryl Triflates from *o*-Silylaryl Triflates by Aluminum-mediated Desilyliodination, S. Yoshida,* Y. Hazama, K. Kanemoto, Y. Nakamura, T. Hosoya,* *Chem. Lett.*, **48**, 742-745, (2019).

3 Modular Synthesis of Unsymmetrical Doubly-ring-fused Benzene Derivatives Based on a Sequential Ring Construction Strategy Using Oxadiazinones as a Platform Molecule, T. Meguro, S. Chen, K. Kanemoto, S. Yoshida,* T. Hosoya,* *Chem. Lett.*, **48**, 582-585, (2019).

2 Modified Conditions for Copper-catalyzed *ipso*-Thiolation of Arylboronic Acid Esters with Thiosulfonates, K. Kanemoto, S. Yoshida,* T. Hosoya,* *Chem. Lett.*, **47**, 85-88, (2018).



1 Rhodium-catalyzed odorless synthesis of diaryl sulfides from borylarenes and *S*-aryl thiosulfonates, K. Kanemoto, Y. Sugimura, S. Shimizu, S. Yoshida,* T. Hosoya,* *Chem. Commun.*, **53**, 10640-10643, (2017). 【Selected as inside back cover】


Ts
S
Ar2
[Rh(OH)(cod)]2
K3PO4
MeOH
50 °C
Ar1
B
Ar1
S
Ar2
✓ Efficient
✓ Mild conditions
✓ Odorless
✓ Wide scope