

# Hiroki Hayashi

Specially Appointed Assistant Professor  
Institute for Chemical Reaction Design and Discovery  
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## Personal Data

Date of Birth	November 11 <sup>th</sup> , 1988
Place of Birth	Aichi, Japan
Gender	Male
Nationality	Japan

## Education

2011.3	<b>B. Eng.</b> , School of Engineering, Nagoya University, Japan (Prof. Kazuaki Ishihara)
2013.3	<b>M. Eng.</b> , Graduate School of Engineering, Nagoya University, Japan (Prof. Kazuaki Ishihara)
2016.3	<b>PhD. Eng.</b> , Graduate School of Engineering, Nagoya University, Japan (Prof. Kazuaki Ishihara)
2014.9–12	<b>Visiting Scholar</b> , Department of Chemistry, University of Berkeley, California, United States (Prof. John F. Hartwig)

## Academic Career

2016.4–2017.3	<b>Postdoctoral Researcher</b> , Department of Chemistry, University of Berkeley, California, United States (Prof. John F. Hartwig)
2017.4–2020.1	<b>Assistant Professor</b> , Faculty of Arts and Science, Kyushu University (Assoc. Prof. Tatsuya Uchida)
2020.2–present	<b>Specially Appointed Assistant Professor</b> , WPI-ICReDD, Hokkaido University (JST-ERATO Maeda Artificial Intelligence for Chemical Reaction Design and Discovery Project)

## Fellowships & Grants

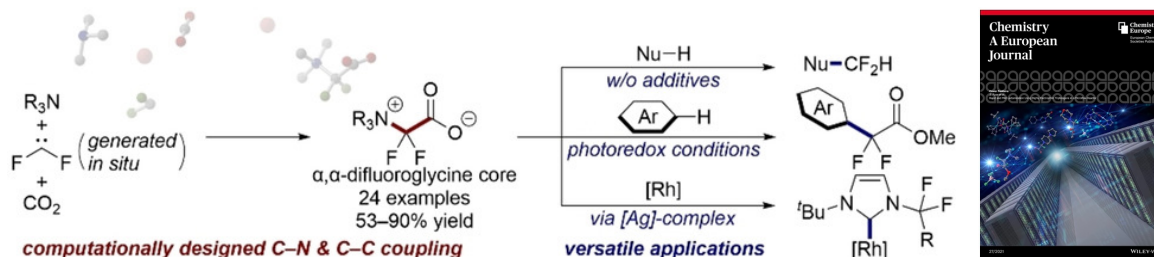
2015.4–2016.3	Research Fellow of the Japan Society for the Promotion of Sciences (DC2)
2016.4–2017.3	2016 The Naito Foundation Postdoctoral Fellow for Research Abroad
2020.4–2022.3	JSPS Grant-in-Aid for Young Scientists (20K1528400)
2021.8–2022.2	2021 The NOASTEC Foundation Subsidy for Young Scientists

## Awards

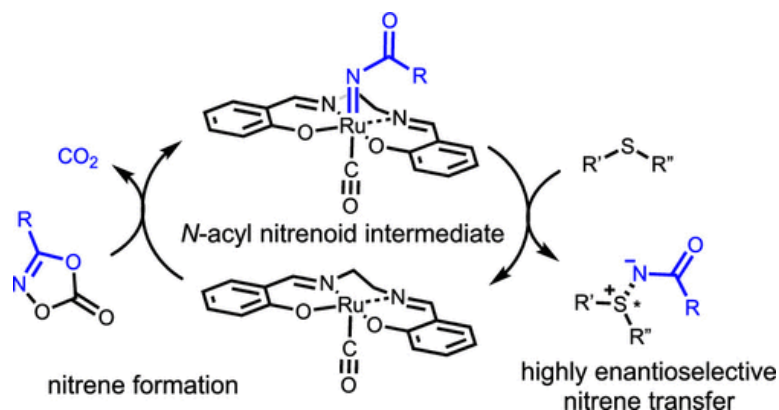
2012	Very Important Presentation Award at the 43rd Annual Meeting of Union of Chemistry-Related Societies in Chubu Area, Japan
2013	Poster Award at the 1st IGER Annual Meeting, Japan
2014	Poster Award at the 2nd IGER Annual Meeting, Japan
2014	Poster Award at the 31st Seminar of Organic Synthetic Chemistry, Japan
2015	Reaxys PhD Prize Finalist, UK
2015	Otsu Conference Award Fellow, Japan
2016	Presentation Award at the 96th CSJ Annual Meeting, Japan
2020	The Central Glass Award in Synthetic Organic Chemistry, Japan
2021	The Best Poster Presentation Award at the 7th Hokkaido University Cross-Departmental Symposium, Japan

## Publications

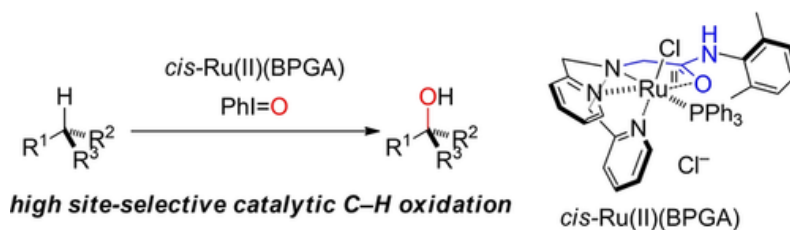
1. “In Silico Reaction Screening with Difluorocarbene for diverse *N*-difluoroalkylative Dearomatization of Pyridines”  
Hiroki Hayashi, Hitomi Katsuyama, Hideaki Takano, Yu Harabuchi, Satoshi Maeda, Tsuyoshi Mita  
*submitted.*
2. “Synthesis of Difluoroglycine Derivatives from Amines, Difluorocarbene, and CO<sub>2</sub>: Computational Design, Scope, and Applications”  
Hiroki Hayashi, Hideaki Takano, Hitomi Katsuyama, Yu Harabuchi, Satoshi Maeda, Tsuyoshi Mita  
*Chem. Eur. J.* **2021**, *27*, 10040–10047.



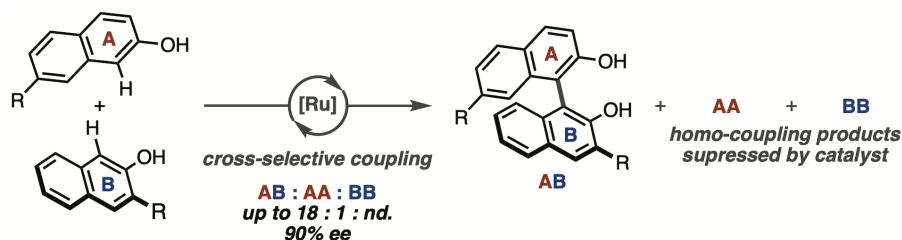
3. “Ruthenium-Catalyzed Asymmetric N-Acyl Nitrene Transfer Reaction: Imidation of Sulfide”  
Masaki Yoshitake, Hiroki Hayashi, Tatsuya Uchida  
*Org. Lett.* **2020**, *22*, 4021–4025.



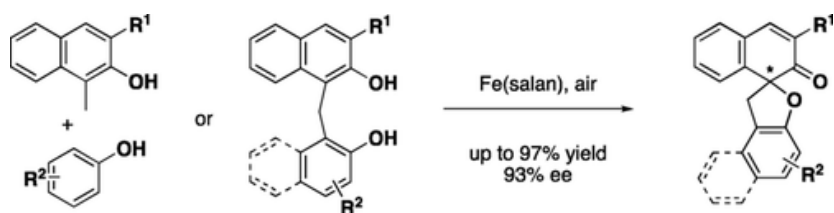
4. “Non-Heme-Type Ruthenium Catalyzed Chemo- and Site-Selective C–H Oxidation”  
Daiki Doiuchi, Tatsuya Nakamura, Hiroki Hayashi, Tatsuya Uchida  
*Chem. Asian J.* **2020**, *15*, 762–765.



5. “Ruthenium-Catalyzed Cross-Selective Asymmetric Oxidative Cross-Coupling of Arenols”  
Hiroki Hayashi, Takamasa Ueno, Chungsik Kim, Tatsuya Uchida  
*Org. Lett.* **2020**, *22*, 1469–1474.

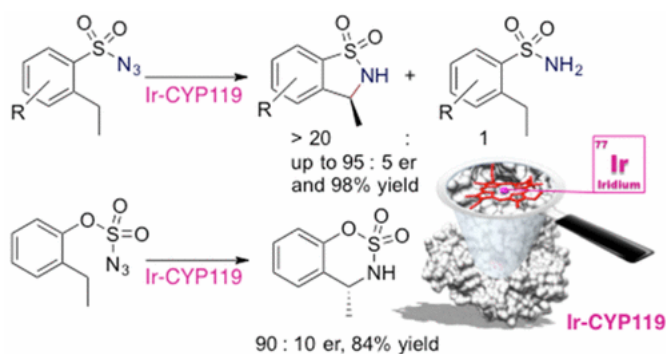


6. “Iron-Catalyzed Asymmetric Inter- and Intramolecular Aerobic Oxidative Dearomatizing Spirocyclization of 2-Naphthols”  
Takuya Oguma, Daiki Doiuchi, Chisaki Fujitomo, Chungsik Kim, Hiroki Hayashi, Tatsuya Uchida, Tsutomu Katsuki  
*Asian J. Org. Chem.* **2019**, *9*, 404–415.



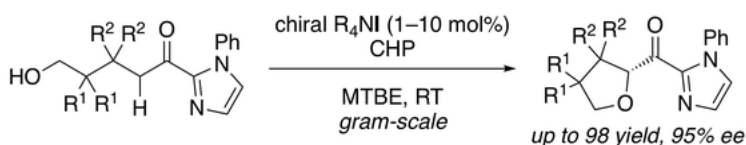
7. “Chemoselective, Enzymatic C–H Bond Amination Catalyzed by a Cytochrome P450 Containing an Ir(Me)-PIX Cofactor”

Paweł Dydio, Hanna M. Key, Hiroki Hayashi, Douglas S. Clark, John F. Hartwig  
*J. Am. Chem. Soc.* **2017**, *139*, 1750–1753.



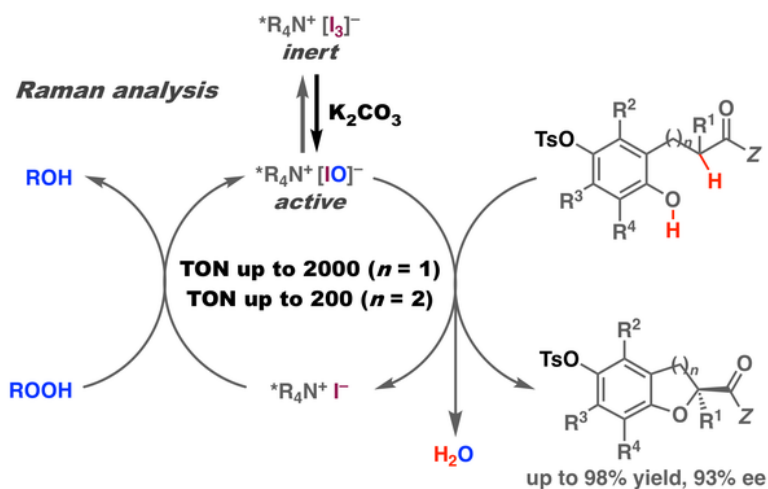
8. “Chiral Ammonium Hypiodite Salt-Catalyzed Enantioselective Oxidative Cycloetherification to 2-Acyl Tetrahydrofurans”

Muhammet Uyanik, Hiroki Hayashi, Hirokazu Iwata, Kazuaki Ishihara  
*Chem. Lett.* **2016**, *45*, 353–355.



9. “High-Turnover Hypiodite Catalysis for Asymmetric Synthesis of Tocopherols”

Muhammet Uyanik, Hiroki Hayashi, Kazuaki Ishihara  
*Science* **2014**, *345*, 291–294.



Review:

10. “Nitrene Transfer Reactions for Asymmetric C-H Amination: Recent Development”

Hiroki Hayashi, Tatsuya Uchida

*Eur. J. Org. Chem.* **2020**, 8, 909–916.

