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Education

2004 Dr.Sc. Kyushu University
2001 M.Sc. Kyushu University
1999 B.Sc. Kyushu University

Professional Experience

Associate Professor, Faculty of Arts and Science, Kyushu University 2013-present
Associate Professor, WPI-I2CNER, Kyushu University 2012-present

Associate Professor, Graduate School of Science, Kyushu University 2012-2013
Assistant Professor, WPI-I2CNER, Kyushu University 2010-2012
Assistant Professor, Graduate School of Science, Kyushu University 2007-2012
Research Associate, Graduate School of Science, Kyushu University 2004-2007

Award

In 2008:

The TORAY Industries, Inc., Award in Synthetic Organic Chemistry

In 2015:

1) Incentive Award in Synthetic Organic Chemistry at Kyushu-Yamaguchi branch
2) Banyu Chemist Award 2015

In 2016:

Thieme Chemistry Journals Award

Publication

(1) Katsuki Catalysts for Asymmetric Oxidation: Design Concepts, Serendipities for Breakthroughs, and Applications

Irie, R., **Uchida, T**., & Matsumoto, K.

Chem. Lett., **44** (10), 1268-1283 (2015)

(2) Ruthenium-Catalyzed Oxidative Kinetic Resolution of Unactivated and Activated Secondary Alcohols with Air as the Hydrogen Acceptor at Room Temperature

Mizoguchi, H., **Uchida, T**., & Katsuki, T.

Angew. Chem. Int. Ed., **53**, 3178-3182 (2014)

(3) Asymmetric nitrene transfer reactions: sulfimidation, aziridination and C-H amination using azide compounds as nitrene precursors

Uchida, T., & Katsuki, T.

The Chemical Record, **2014**, *14*, 117-129 (2014)

(4) Green Asymmetric Oxidation using Air as Oxidant

Uchida, T., & Katsuki, T.

有機合成化学協会誌, **71** (11), 1126-1135 (2013)

(5) Enantio- and Regioselective Intermolecular Benzylic and Allylic C-H Bond

Amination.

Nishioka, Y., **Uchida, T**., & Katsuki, T.

Angew. Chem. Int. Ed., **52**, 1739-1742 (2013) (Hot paper)

(6) Enantiopure Aziridinyl Ketones and Formal Asymmetric Synthesis of (+)-PD 128907.

Fukunaga, Y., **Uchida, T.,** Ito, Y., Matsumoto, K., & Katsuki, T.

Org. Lett., **14** (17), 4658-4661 (2012)

(7) Asymmetric Epoxidation of Conjugated Olefins with Dioxygen as Oxidant.

Koya, S., Nishioka, Y., Mizoguchi, H., **Uchida, T.** & Katsuki, T.

Angew. Chem. Int. Ed., **51**, 8243-8246 (2012)

(8) Asymmetric Olefin Aziridination Using a Newly Designed Ru(CO)(salen) Complex as Catalyst.

Kim, C., **Uchida, T.** & Katsuki, T.

Chem. Commun., (48), 7188-7190 (2012).

(9) Enantioselective Intramolecular Benzylic C–H Bond Amination: Efficient Synthesis of Optically Active Benzosultams.

Ichinose, M., Suematsu, H., Yasutomi, Y., Nishioka, Y., **Uchida**, **T**. & Katsuki, T.

Angew. Chem. Int. Ed., **50** (42), 9884-9887 (2011)

(10) Photopromoted Ru-Catalyzed Asymmetric Aerobic Sulfide Oxidation and Epoxidation Using Water as a Proton Transfer Mediator.

Tanaka, H., Nishikawa, H., **Uchida, T**. & Katsuki, T.

J. Am. Chem. Soc., **132** (34), 12034-12041 (2010)

(11) Construction of a New Type of Chiral Bidentate NHC Ligands: Copper-Catalyzed Asymmetric Conjugate Alkylation.

Uchida, T. & Katsuki, T.

Tetrahedron Lett., **50** (33), 4741-4743 (2009)

(12) $Ru(PPh_3)(OH)$-salen complex: a Designer Catalyst for Chemoselective Aerobic Oxidation of Primary Alcohols.

Mizoguchi, H., **Uchida, T**. & Katsuki, T.

Tetrahedron Lett., **50** (26), 3432-3435 (2009)

(13) Construction of Aryliridium-Salen Complexes: Enantio- and *cis*-Selective Cyclopropanation of Conjugated and Non-Conjugated Olefins.

Suematsu, H., Kanchiku, S., **Uchida, T**. & Katsuki, T.

J. Am. Chem. Soc., **130** (31), 10327-10337 (2008)

(14) Asymmetric Hetero Diels-Alder Reaction Catalyzed by Chromium Complexes of Heterogeneously Hybridized Salen/Salan Ligands.

Eno, S., Egami, H., **Uchida, T**. & Katsuki, T.

Chem. Lett., **37** (6), 632-633 (2008)

(15) Aerobic Oxidative Kinetic Resolution of Racemic Alcohols with Bidentate Ligand-Binding Ru(salen) Complex as Catalyst.

Nakamura, Y., Egami, H., Matsumoto, K., **Uchida, T**. & Katsuki, T.

Tetrahedron, **63** (28), 6383-6387 (2007)

(16) Asymmetric Sulfimidation with *cis*-β Ru(salalen)$(CO)_2$ Complexes as Catalyst.

Fujita, H., **Uchida, T**. & Katsuki, T.

Chem. Lett., **36** (9), 1092-1093 (2007)

(17) Construction of an Aryliridium-salen Complex for Highly *Cis*- and Enantioselective Cyclopropanation.

Kanchiku, S., Suematsu, H., Matsumoto, K., **Uchida, T**. & Katsuki, T.

Angew. Chem. Int. Ed., **46** (21), 3889-3891 (2007)

(18) Construction of Robust Ruthenium(salen)(OC) Complexes and Asymmetric Aziridination with Nitrene Precursors in the Form of Azide Compounds That Bear Easily Removable *N*-Sulfonyl Groups.

Kawabata, H., Omura, K., **Uchida, T**. & Katsuki, T.

Chem. Asian J., **2** (2), 248-256 (2007)

(19) α-Diazoacetates as Carbene Precursors: Metallosalen-Catalyzed Asymmetric Cyclopropanation.

Uchida, T. & Katsuki, T.

Synthesis, (10), 1715-1723 (2006)

(20) Design of Robust Ru(salen) complex: Aziridination with Improved Turnover Number Using *N*-Arylsulfonyl Azides as Precursors.

Omura, K., **Uchida, T**., Irie, R. & Katsuki, T.
Chem. Commun., (18), 2060-2061 (2004)

(21) Zr[bis(salicylidene)ethylenediaminato]-Mediated Baeyer-Villiger Oxidation: Stereospecific Synthesis of Abnormal and Normal Lactones.

Watanabe, A., **Uchida, T**., Irie, R. & Katsuki, T.
Proc. Natl. Acad. Sci. USA, **101** (16), 5737-5742 (2004)

(22) Construction of a New Asymmetric Reaction Site: Asymmetric 1,4-Addition of Thiol Using Pentagonal Bipyramidal Hf(salen) Complex as Catalyst.

Matsumoto, K., Watanabe, A., **Uchida, T**., Ogi, K. & Katsuki, T.
Tetrahedron Lett., **45** (11), 2385-2388 (2004)

(23) Mechanism of Asymmetric Sulfimidation with *N*-Alcoxycarbonyl Azide in the Presence of (OC)Ru(salen) Complex.

Uchida, T., Tamura, Y., Ohba, M. & Katsuki, T.
Tetrahedron Lett., **44** (43), 7965-7968 (2003)

(24) Enantioselective Aziridination and Amination Using *p*-Toluenesulfonyl Azide in the Presence of Ru(salen)(CO) Complex.

Omura, K., Murakami, M., **Uchida, T**. & Katsuki, T.
Chem. Lett., **32** (4), 354-355 (2003)

(25) Asymmetric Intramolecular Cyclopropanation of Diazo Compounds with Metallosalen Complexes as Catalyst: Structural Tuning of Salen Ligand.

Saha, B., **Uchida, T**. & Katsuki, T.
Tetrahedron-Asymmetry, **14** (7), 823-836 (2003).

(26) Highly Enantioselective (OC)Ru(salen)-Catalyzed Sulfimidation Using *N*-Alkoxycarbonyl Azide as Nitrene Precursor.

Tamura, Y., **Uchida, T**. & Katsuki, T.
Tetrahedron Lett., **44** (16), 3301-3303 (2003)

(27) Ru(salen)-Catalyzed Asymmetric Sulfimidation and Subsequent [2,3]Sigmatropic Rearrangement.

Murakami, M., **Uchida, T**., Saito, B. & Katsuki, T.
Chirality, **15** (2), 116-123 (2003)

(28) New Asymmetric Catalysis by (Salen)Cobalt(III) Complexes

(Salen=[Bis(salicylidene)ethylenediaminato]={{2,2'-[ethane-1,2-diyl]bis[(nitrilo-κ*N*)methylidyne]bis[phenolato-κ*O*]}(2-)}) of *cis*-β-Structure: Enantioselective *Baeyer-Villiger* Oxidation of Prochiral Cyclobutanones.

Uchida, T., Katsuki, T., Ito, K., Akashi, S., Ishi, A. & Kuroda, T.

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(29) Highly Enantioselective Intramolecular Cyclopropanation of Alkenyl Diazo Ketones Using Ru(salen) as Catalyst.

Saha, B., **Uchida, T**. & Katsuki, T.

Chem. Lett., (8), 846-847 (2002)

(30) Watanabe, A., **Uchida, T**. & Katsuki, T.

Highly Enantioselective Baeyer-Villiger Oxidation Using Zr(salen) Complex as Catalyst.

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(31) Ru(salen)-Catalyzed Asymmetric Sulfimidation Using Arylsulfonyl Azide.

Murakami, M., **Uchida, T**. & Katsuki, T.

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(32) Cationic Co(III)(salen)-Catalyzed Enantioselective Baeyer-Villiger Oxidation of 3-Arylcyclobutanones Using Hydrogen Peroxide as a Terminal Oxidant.

Uchida, T. & Katsuki, T.

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(33) Highly Enantioselective Cyclopropanation with Co(II)-salen Complexes: Control of *cis*- and *trans*-Selective by Rational Ligand-Design.

Niimi, T., **Uchida, T**. & Katsuki, T.

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(35) Lewis Acid Catalysis of Second-Generation Metallosalen Complexes: An Explanation for Stereochemistry of Asymmetric Hetero Diels-Alder Reaction.

Mihara, J., Aikawa, K., **Uchida, T**., Irie, R. & Katsuki, T.

Heterocycles, **54** (1), 395-404 (2001)

(36) 2-(Phosphinoaryl)pyridine Ligand (2): Asymmetric Allylic Alkylation of 2-Cycloalkenyl Carboxylate.
Ito, K., Kashiwagi, R**., Uchida, T**. & Katsuki, T.
Synlett, (2), 284-286 (2001)

(37) Intermolecular Asymmetric Cyclopropanation with (Nitroso)(Salen)ruthenium(II) Complexes as Catalyst.
Saha, B., **Uchida, T**. & Katsuki, T.
Synlett, (1), 114-116 (2001)

(38) Catalytic Asymmetric and Chemoselective Aerobic Oxidation: Kinetic Resolution of *sec*-Alcohols.
Masutani K., **Uchida, T**., Irie, R. & Katsuki, T.
Tetrahedron Lett., **41**(26), 5119-5123 (2000)

(39) Co(II)-salen-catalyzed highly *cis*- and enantioselective cyclopropanation.
Niimi, T., **Uchida, T**., Irie, R. & Katsuki, T.
Tetrahedron Lett., **41**(19), 3647-3651 (2000)

(40) *Cis*- and Enantio-Selective Cyclopropanation with Chiral (ON^+)Ru-Salen Complex as a Catalyst.
Uchida, T., Irie, R. & Katsuki, T.
Tetrahedron, 56 (22), 3501-3509 (2000)

(41) Highly *cis*- and Enantioface-Selective Cyclopropanation Using (*R*,*R*)-Ru-Salen Complex. Solubility Dependent Enantioface Selection.
Uchida, T., Irie, R. & Katsuki, T.
Synlett, (11), 1793-1795 (1999)

(42) Chiral (ON)Ru-salen-Catalyzed Cyclopropanation: High *cis*- and Enantioselectivity.
Uchida, T., Irie, R. & Katsuki, T.
Synlett, (7), 1163-1165 (1999)