

平成22年度 研究業績

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1. 発表論文等（査読付き論文，著書，総説等の発表状況）

- (1) A Short, Catalytic, Asymmetric Synthesis of Diospongins A and B via a One-pot Sequential Hetero-Diels–Alder/Mukaiyama–Michael Reaction Process
Anada, M.; Washio, T.; Watanabe, Y.; Takeda, K.; Hashimoto, S.* *Eur. J. Org. Chem.* **2010**, 6850–6854.
- (2) Catalytic Asymmetric Synthesis of Descurainin via 1,3-Dipolar Cycloaddition of a Carbonyl Ylide Using $\text{Rh}_2(R\text{-TCPTTL})_4$
Shimada, N.; Hanari, T.; Kurosaki, Y.; Anada, M.; Nambu, H.; Hashimoto, S.* *Tetrahedron Lett.* **2010**, 51, 6572–6575.
- (3) A Polymer-Supported Chiral Dirhodium(II) Complex: Highly Durable and Recyclable Catalyst for Asymmetric Intramolecular C–H Insertion Reactions
Takeda, K.; Oohara, T.; Anada, M.; Nambu, H.; Hashimoto, S.* *Angew. Chem. Int. Ed.* **2010**, 49, 6979–6983.
- (4) Catalytic Asymmetric Synthesis of the *endo*-6-Aryl-8-oxabicyclo[3.2.1]oct-3-en-2-one Natural Product from *Ligusticum Chuanxing* via 1,3-Dipolar Cycloaddition of a Formyl-Derived Carbonyl Ylide Using $\text{Rh}_2(S\text{-TCPTTL})_4$
Shimada, N.; Hanari, T.; Kurosaki, Y.; Takeda, K.; Anada, M.; Nambu, H.; Shiro, M.; Hashimoto, S.* *J. Org. Chem.* **2010**, 75, 6039–6042.
- (5) Asymmetric Intermolecular N–H Insertion Reaction of Phenyl diazoacetates with Anilines Catalyzed by Achiral Dirhodium(II) Carboxylates and Cinchona Alkaloids
Saito, H.; Uchiyama, T.; Miyake, M.; Anada, M.; Hashimoto, S.*; Takabatake, T.; Miyairi, S. *Heterocycles* **2010**, 81, 1149–1155.
- (6) Catalytic Asymmetric Construction of the 7-*exo*-Aryl-6,8-dioxabicyclo[3.2.1]octane Framework of Psoracorylifols B and C Using a Carbonyl Ylide Cycloaddition Strategy
Kurosaki, Y.; Shimada, N.; Anada, M.; Nambu, H.; Hashimoto, S.* *Bull. Korean Chem. Soc.* **2010**, 31, 694–696.
- (7) The Mukaiyama Aldol and Mukaiyama–Michael Reaction Promoted by Commercially Available Molecular Sieves
Anada, M.; Washio, T.; Watanabe, Y.; Hashimoto, S.* *Heterocycles* **2010**, 80, 1489–1503.

- (8) Stereocontrolled Construction of 1,2-*cis*- α -Glycosidic Linkages Using Glycosyl Diphenyl Phosphates and Synthesis of α -galactosylceramide KRN7000
Nambu, H.; Nakamura, S.; Suzuki, N.; Hashimoto, S.* *Trends Glycosci. Glycotechnol.* **2010**, *22*, 26–40.

2. 学会発表等（国内外の招待講演および国際会議での発表状況）

- (1) Highly Enantioselective Hetero-Diels–Alder Reactions between Rawal’s Diene and Aldehydes Catalyzed by Chiral Dirhodium(II) Carboxamidates
Watanabe, Y.; Washio, T.; Shimada, N.; Anada, M.; Hashimoto, S.* 21st French-Japanese Symposium on Medicinal and Fine Chemistry, Kyoto, Japan, 2010.5.9-12（ポスター発表）.
- (2) Asymmetric Syntheses of Dihydrobenzofuran Natural Products via Dirhodium(II)-Catalyzed Intramolecular C–H Insertion Process
Natori, N.; Nambu, H.; Hashimoto, S.* 21st French-Japanese Symposium on Medicinal and Fine Chemistry, Kyoto, Japan, 2010.5.9-12（ポスター発表）.
- (3) Catalytic Asymmetric Reactions Using Chiral Rh(II) Complexes
Hashimoto, S.* BIT's 1st World Congress of Catalytic Asymmetric Synthesis 2010, Beijing, China, 2010.5.19-21（招待講演）.
- (4) Enantioselective Aminations Catalyzed by Dirhodium(II) Carboxylates
Anada, M.; Hashimoto, S.* BIT's 1st World Congress of Catalytic Asymmetric Synthesis 2010, Beijing, China, 2010.5.19-21（ポスター発表）.
- (5) Novel Strategy for Oligosaccharide Synthesis Based on Glycosidations Capitalizing on Phosphorus-Containing Leaving Groups: Application to the Synthesis of Sialyl Lewis X Derivatives
Suzuki, N.; Arihara, R.; Nakamura, S.; Hashimoto, S.* Eleventh Tetrahedron Symposium, Beijing, China, 2010.6.22-25（ポスター発表）.
- (6) Asymmetric Syntheses of Oxabicyclic Natural Products via Catalytic Enantioselective Carbonyl Ylide Cycloaddition Process
Kurosaki, Y.; Hanari, T.; Anada, M.; Shimada, N.; Hashimoto, S.* Eleventh Tetrahedron Symposium, Beijing, China, 2010.6.22-25（ポスター発表）.
- (7) Catalytic Asymmetric Reactions Using Chiral Rh(II) Complexes
Hashimoto, S.* Symposium on Molecular Chirality 2010, Sapporo, Japan, 2010.7.11-12（招待講演）.

- (8) Enantioselective Aminations Catalyzed by Dirhodium(II) Carboxylates
Anada, M.; Tanaka, M.; Kurosaki, Y.; Hashimoto, S.* 22nd International Symposium on Chirality (ISCD-22, Chirality 2010), Sapporo, Japan, 2010.7.12-15 (ポスター発表).
- (9) Catalytic Asymmetric Synthesis of Dihydrobenzofuran Natural Products via Intramolecular C–H Insertion Reaction Using Chiral Dirhodium(II) Carboxylates
Natori, Y.; Nambu, H.; Hashimoto, S.* 22nd International Symposium on Chirality (ISCD-22, Chirality 2010), Sapporo, Japan, 2010.7.12-15 (ポスター発表).
- (10) Rh(II)-Catalyzed Asymmetric Ring Forming Reactions
Hashimoto, S.* 日本プロセス化学会サマーシンポジウム, 東京, 2010.7.15-16 (招待講演).
- (11) The Polymer-Supported Dirhodium(II) Catalyst for Asymmetric Amination Reaction
Ohara, T.; Takeda, K.; Anada, M.; Nambu, H.; Hashimoto, S.* The 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), Honolulu, Hawaii, USA, 2010.12.15-20 (ポスター発表).
- (12) Highly Enantioselective Hetero-Diels–Alder Reactions between Rawal’s Diene and Aldehydes Catalyzed by Chiral Dirhodium(II) Carboxamidates
Watanabe, Y.; Washio, T.; Shimada, N.; Anada, M.; Hashimoto, S.* The 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), Honolulu, Hawaii, USA, 2010.12.15-20 (ポスター発表).
- (13) Asymmetric Synthesis of Dihydrobenzofuran Natural Products via Intramolecular C–H Insertion Reaction Catalyzed by Chiral Dirhodium(II) Carboxylates
Natori, Y.; Nambu, H.; Takeda, K.; Hashimoto, S.* The 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), Honolulu, Hawaii, USA, 2010.12.15-20 (ポスター発表).

3. 特許

該当無し

4. 学会・シンポジウム等の開催状況

該当無し

5. 受賞等

(1) 穴田仁洋 (准教授)

平成 22 年度日本薬学会北海道支部奨励賞, 2010.11.27

(2) 渡邊雄大 (博士 1 年)

優秀発表賞 第 134 回日本薬学会北海道支部例会, 2010.5.8

(3) 大原 格 (博士 2 年)

ポスター賞 The 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), Honolulu, Hawaii, USA, 2010.12.19

6. 新聞報道等

(1) **Selected by the Editorial Board of Synfacts** (*Synfacts* **2010**, 324.)

Highly Enantioselective Hetero-Diels–Alder Reactions between Rawal's Diene and Aldehydes Catalyzed by Chiral Dirhodium(II) Carboxamidates. Watanabe, Y.; Washio, T.; Shimada, N.; Anada, M.; Hashimoto, S.* *Chem. Commun.* **2009**, 7294.

(2) **Selected by the Editorial Board of Synfacts** (*Synfacts* **2010**, 1329.)

Catalytic Asymmetric Synthesis of the *endo*-6-Aryl-8-oxabicyclo[3.2.1]oct-3-en-2-one Natural Product from *Ligusticum Chuanxing* via 1,3-Dipolar Cycloaddition of a Formyl-Derived Carbonyl Ylide Using $Rh_2(S\text{-TCPTTL})_4$. Shimada, N.; Hanari, T.; Kurosaki, Y.; Takeda, K.; Anada, M.; Nambu, H.; Shiro, M.; Hashimoto, S.* *J. Org. Chem.* **2010**, 75, 6039.

(3) **Selected by the Editorial Board of Synfacts** (*Synfacts* **2010**, 1442.)

A Polymer-Supported Chiral Dirhodium(II) Complex: Highly Durable and Recyclable Catalyst for Asymmetric Intramolecular C–H Insertion Reactions. Takeda, K.; Oohara, T.; Anada, M.; Nambu, H.; Hashimoto, S.* *Angew. Chem. Int. Ed.* **2010**, 49, 6979.

7. 領域内の共同研究の準備・実施状況とその成果

該当無し

8. その他特記事項

該当無し