

平成23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) Wittig Like Methylenation of Aldehydes in a Microflow System: Selective Methylenation by Differential of Plural Reactions.
Takada, Y.; Matsubara, S. *Chem. Lett.* **2011**, 40 (4), 364-365.
- (2) Asymmetric Catalytic Cycloetherification Mediated by Bifunctional Organocatalysts.
Asano, K.; Matsubara, S. *J. Am. Chem. Soc.* **2011**, 133, 16711-16712.
[*Synfacts* **2011**, (12), 1370-1370]
- (3) A Tandem Reaction of Organozinc Reagent Prepared from Palladium-Catalyzed Umpolung Method: Diastereoselective Formation of Cyclohexene Derivatives Bearing Three Adjacent Stereocenters.
Sada, M.; Nomura, K.; Matsubara, S. *Org. Bioorg. Chem.* **2011**, 9 (5) 1389-1393.
- (4) Nickel-catalyzed [3+2] Cycloaddition of α,β -Unsaturated Ketones with Vinyl Oxiranes.
Sako, S.; Kurahashi, T.; Matsubara, S. *Chem. Lett.* **2011**, 40 (8), 808.-809.
- (5) Nickel-Catalyzed Cycloadditions of Thiophthalic Anhydrides with Alkynes.
Inami, T.; Baba, Y.; Kurahashi, T.; Matsubara, S. *Org. Lett.* **2011**, 13 (8), 1912-1915
- (6) Methylenecyclopropanes in [4+1] Cycloaddition with Enones.
Inami, T.; Sako, S.; Kurahashi, T.; Matsubara, S. *Org. Lett.* **2011**, 13 (15), 3837-3839.
- (7) Silver-Catalyzed Intramolecular Chloroamination of Allenes: Easy Access to Functionalized 3-Pyrroline and Pyrrole Derivatives.
Sai, M.; Matsubara, S. *Org. Lett.* **2011**, 13 (17), 4676-4679.
- (8) Dehydrogenative Diels-Alder Reaction.
Ozawa, T.; Kurahashi, T.; Matsubara, S. *Org. Lett.* **2011**, 13 (19), 5390-5393.
- (9) Nickel-catalyzed Cycloadditions of Benzoxazinones with Alkynes: Synthesis of Quinolines and Quinolones.
Maizuru, N.; Inami, T.; Kurahashi, T.; Matsubara, S. *Chem. Lett.* **2011**, 40, (4), 375-376.
- (10) Nickel-Catalyzed Intermolecular Codimerization of Acrylates and Alkynes.
Horie, H.; Koyama, I.; Kurahashi, T.; Matsubara, S. *Chem. Commun.* **2011**, 47(9), 2658-2660.
- (11) Nickel-Iminophosphine-Catalyzed [4+2] Cycloaddition of Enones with Allenes: Synthesis of Highly Substituted Dihydropyrans.
Sako, S.; Kurahashi, T.; Matsubara, S. *Chem. Commun.* **2011**, 47(21), 6150-6152.
- (12) Methylenecyclopropane as C1 Synthetic Units: [1+4] Cycloaddition via a Nickel Catalyst.
Inami, T.; Kurahashi, T.; Matsubara, S. *Chem. Commun.* **2011**, 47(34), 9711-9713.
- (13) Nickel-Catalyzed Cycloaddition of *o*-Arylcarboxybenzonitriles and Alkynes via Cleavage of Two Carbon-Carbon σ Bonds.

- Nakai, K.; Kurahashi, T.; Matsubara, S. *J. Am. Chem. Soc.* **2011**, *133* (29), 11066-11067.
- (14) Transition-Metal Chloride Mediated Addition Reaction of Diorganomagnesium to Easily Enolizable Ketones.
Sada, M.; Matsubara, S. *Tetrahedron* **2011**, *67* (14) 2612—2614.
- (15) Nickel-Catalyzed Cycloaddition of $\alpha,\beta,\gamma,\delta$ -Unsaturated Ketones with Alkynes.
Horie, H.; Kurahashi, T.; Matsubara, S. *Angew. Chem. Int. Ed.* **2011**, *50* (38), 8956-8959.
- (16) Nickel-catalyzed Heteroannulation of o-Haloanilines with Alkynes.
Yoshida, Y.; Kurahashi, T.; Matsubara, S. *Chem. Lett.* **2011**, *40* (10), 1067-1068.
- (17) Nickel-catalyzed Cycloaddition of Aromatic (O-Benzyl)ketoximes with Alkynes to Produce Isoquinoline and Isoquinoline N-Oxide Derivatives.
Yoshida, Y.; Kurahashi, T.; Matsubara, S. *Chem. Lett.* **2011**, *40* (10), 1140-1141.
- (18) Nickel-catalyzed Decarboxylative Polymerization of 6-Alkynylisatoic Anhydride.
Nakai, K.; Shiba, T.; Yoshino, Y.; Kurahashi, T.; Matsubara, S. *Chem. Lett.* **2011**, *40* (10), 1240-1241.
- (19) Preparation of Furan Ring from 2-(Oxiran-2-yl)-1-alkylethanone Catalyzed by Nafion® Sac-13.
Tombe, R.; Matsubara, S. *Heterocycles* **2012**, *84*(2), 775-783.

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) New Methods for the Preparation of Heterocyclic Compounds
Matsubara, S. 2nd International Collaborative and Cooperative Chemistry Symposium (ICCCS2), The University of Queensland, Brisbane, Australia, 2011, 11.01 (招待講演)
- (2) Asymmetric Synthesis of Heterocycles via Cyclization by Bifunctional Organocatalyst
Asano, K.; Matsubara, S. First Germany-Japan Organocatalytic Symposium, Kyoto University, Kyoto, 2011, 10.14 (Poster)
- (3) Selective Methylenation of Aldehydes with Bis(iodozincio)methane
Takada, Y.; Matsubara, S. ISIS-7, Kobe, Japan, 2011, 10.10 (Poster)
- (4) Organocatalytic Oxy-Michael Addition to γ -Hydroxy- α,β -Unsaturated Thioester
Okamura, T.; Asano, K.; Matsubara, S. ISIS-7, Kobe, Japan, 2011, 10.10 (Poster)
- (5) A Novel Nickel-catalyzed [4+1] Cycloaddition
Inami, T.; Kurahashi, T.; Matsubara, S. ISIS-7, Kobe, Japan, 2011, 10.10 (Poster)
- (6) Asymmetric Synthesis of Heterocycles via Cyclization by Bifunctional Organocatalyst
Asano, K.; Fukata, Y.; Matsubara, S. ISIS-7, Kobe, Japan, 2011, 10.10 (Poster)

3. 特許

なし

4. 学会・シンポジウム等の開催状況

なし

5. 受賞等

(1) 浅野圭佑 (博士3年)

The ChemComm Poster Prize, The 5th ChemComm International Symposium (RSC Publishing), 2011.05.16.

6. 新聞報道等

なし

7. 国民との科学・技術対話

(1) 滋賀県立膳所高校, 高校2年生 (SSH コース) 7名 (男子4名, 女子3名), 教員2名 (男子1名, 女子1名) に対する有機合成化学実習. マイクロリアクターの使用. 2011.09.27.

8. 領域内の共同研究の準備・実施状況とその成果

なし