

## 研究期間全年度 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. Catalytic Asymmetric Aldol-Type Reaction of Zinc Enolate Equivalent of Amides  
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2. Copper-catalyzed 1,4-Addition Reaction of Grignard Reagent to Enones Using Microflow System  
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3. Procedure-Controlled Enantioselectivity Switch in Organocatalytic 2-Oxazolidinone Synthesis  
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5. Asymmetric Cycloetherifications by Bifunctional Aminothiourea Catalysts: The Importance of Hydrogen Bonding  
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9. Cationic Iron(III) Porphyrin Catalyzed Dehydrative Friedel–Crafts Reaction of Alcohols with Arenes  
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10. [3+2] Cycloaddition of Aziridines with Alkenes Catalyzed by Cationic-Manganese-Porphyrin  
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12. Synthesis of Phenanthrenes by Cationic Chromium(III) Porphyrin-Catalyzed Dehydration  
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17. Cobalt(III) Porphyrin Catalyzed Aza-Diels-Alder Reaction  
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24. Preparation of Furan Ring from 2-(Oxiran-2-yl)-1-alkylethanone Catalyzed by Nafion® Sac-13  
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31. Silver-Catalyzed Intramolecular Chloroamination of Allenes: Easy Access to Functionalized 3-Pyrroline and Pyrrole Derivatives.  
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37. Nickel-Catalyzed Cycloaddition of *o*-Arylcarboxybenzotrienes and Alkynes via Cleavage of Two Carbon-Carbon  $\sigma$  Bonds.  
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Asano, K.; Matsubara, S.\* *Heterocycles*, **2010**, *80*, 989-1002 (10.3987/COM-13-12885)
50. Preparation of Ester-group Substituted Allylic Zinc by Palladium-catalyzed Umpolung of  $\gamma$ -Acyloxy- $\alpha, \beta$ -unsaturated Ester by Bis(iodozincio)methane.  
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Asano, K.; Matsubara, S.\* *Org. Lett.*, **2009**, *11*, 1757-1759 (10.1021/ol900125y)
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## 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）

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2. Procedure-Controlled Enantioselectivity Switch in Organocatalytic 2-Oxazolidinone Synthesis  
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松原誠二郎, 平成24年度後期有機合成化学講習会, 東京, 2012.11.20
3. 有機亜鉛反応剤系でのマイクロフローの微分的な利用  
松原誠二郎, フロー・マイクロ合成研究会第26回公開講演会, 大阪, 2012.8.3
4. 環化不可と環化反応の新しい工夫  
松原誠二郎, 平成24年度後期有機合成化学講習会, 東京, 2012.11.20
5. Novel Synthetic Method for Heterocyclic Compounds  
Seijiro Matsubara, Bristol-Kyoto Organic Synthesis Workshop in Kyoto, 2012.11.17
6. 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)
7. (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)
8. Selective Methylenation of Aldehydes with Bis(iodozincio)methane  
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9. Organocatalytic Oxy-Michael Addition to  $\gamma$ -Hydroxy- $\alpha,\beta$ -Unsaturated Thioester  
Okamura, T.; Asano, K.; Matsubara, S. ISIS-7, Kobe, Japan, 2011, 10.10 (Poster)

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Inami, T.; Kurahashi, T.; Matsubara, S. ISIS-7, Kobe, Japan, 2011, 10.10 (Poster)
11. Asymmetric Synthesis of Heterocycles via Cyclization by Bifunctional Organocatalyst  
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### 3. 特許

該当なし

### 4. 学会・シンポジウム等の開催状況

該当なし

### 5. 受賞等

- (1) 桑野 徹 (修士1年)  
ポスター賞 第60回有機金属化学討論会、2013.10.8
- (2) 浅野圭佑 (博士3年)  
学生講演賞 第92回日本化学会年会、2012.4.12
- (3) 浅野圭佑 (博士3年)  
The ChemComm Poster Prize, The 5<sup>th</sup> ChemComm International Symposium (RSC Publishing), 2011, 05.16

### 6. 新聞報道等

該当なし

### 7. 国民との科学・技術対話

- (1) 第8回女子中高生のための関西科学塾, 講義と実習「分子をつくる現場-簡単な有機合成と構造確認-」 女子中高生6名。京大吉田キャンパス, 京都トラベラーズ・インにて2014.3.15, 16。  
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- (2) 京都府立亀岡高校, 子どもの知的好奇心をくすぐる体験授業「有機化学-結合について-」講義及び実習。京都府立亀岡高校2年生60名。亀岡高校にて, 2014.2.5。  
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- (3) 滋賀県立膳所高校SSH, 大学研究室実習「分子の分析, 構造決定」  
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- (4) 第7回女子中高生のための関西科学塾, 講義と実習「分子をつくる現場-簡単な有機合成と構造確認-」 女子中高生14名。京大桂キャンパスにて2012.10.21。

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- (5) 私立西大和高校 SS 講義, 「化学とは?理科とは?~有機化学の成り立ち(結合を中心に)~」

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子細は, 西大和学園 HP : <http://www.nishiyamato.ed.jp/ny/news/detail.cgi?no=269>

- (6) 京都府立園部高校, 子どもの知的好奇心をくすぐる体験授業「電子のやりとり-結合について-」京都府立園部高校 2 年生男子 21 名, 女子 22 名。園部高校にて, 2012.10.29。

- (7) 京都府立西城陽高校, 子どもの知的好奇心をくすぐる体験授業「電子のやりとり-結合について-」講義及び実習。京都府立園部高校 2 年生男子 46 名, 女子 40 名。西城陽高校にて, 2012.11.6。子細は, 西城陽高校 HP : [http://www.kyoto-be.ne.jp/nishijyouyou-hs/nj\\_news\\_h24\\_11\\_06.htm](http://www.kyoto-be.ne.jp/nishijyouyou-hs/nj_news_h24_11_06.htm)

- (8) 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

該当なし