

平成22年度 研究業績

村井利昭 (岐阜大学工学部、A01班 公募班員)

1. 発表論文等 (査読付き論文, 著書, 総説等の発表状況)

- (1) 硫黄原子の酸化的・還元的活性化を経る有機合成反応の開発
芝原文利*, 村井利昭*, **2011**, *69*, 28-37.
- (2) Phosphorofluoridic Acid Ammonium Salts and Acids: Synthesis, NMR Properties, and Application as Acid Catalysts
Murai, T.*; Tonomura, Y.; Takenaka, T. *Heteroatom Chem.* **2011** in press.
- (3) Sequential One-pot Reactions of Thioformamides with Organolithium and -Zinc Reagents,
Murai, T.*; Matsushita, K. *Phosphorus, Sulfur, and Silicon* **2011** in press.
- (4) Sequential One-pot Reactions of Thioformates with Lithium Silylacetylides, Arylmagnesium Halides, and Electrophiles Leading to Formation of Propargyl Sulfides
Murai, T.*; Ohashi, T.; Shibahara, F. *Chem. Lett.* **2011**, *40*, 70-71 (Editor's Choice).
- (5) Selenocarbamoylsilanes and -Germanes: Their Synthesis Using Selenocarbamoyllithium and Characterization,
Murai, T.*; Hori, R.; Maruyama, T.; Shibahara, F. *Organometallics* **2010**, *29*, 2400-2402.
- (6) Thioamide Dianions Derived from N-Arylmethyl Thioamides: Generation and Application as Carbon Nucleophiles Adjacent to the Nitrogen Atom
Murai, T.* *Pure Appl. Chem.* **2010**, *82*, 541-554.
- (7) Assignment of the Absolute Configurations of 1-Aryl-2-propanols with the Use of Phosphoroselenoyl Chlorides as Chiral Derivatizing Agents,
Murai, T.*; Tsuji, H.; Imaizumi, S.; Maruyama, T. *Chem. Lett.* **2010**, *39*, 524-526.
- (8) Direct multiple C-H Bond Arylation Reaction of Heteroarenes Catalyzed by Cationic Palladium Complex Bearing 1,10-Phenanthroline
Shibahara, F.*; Yamaguchi, E.; Murai, T.* *Chem. Commun.* **2010**, *46*, 2471-2473.
- (9) Synthesis and Properties of Secondary Thiocarbamoylsilanes
Murai, T.*; Hori, R. *Bull. Chem. Soc. Jpn.* **2010**, *83*, 52-57.

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) Synthesis and Cyclization of *N*-Thioacyl 1,2-Aminoalcohols with 2-Pyridyl Group.
Nagaya, E.; Tahara, S.; Shibahara, F.; Murai, T. The 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), Honolulu, Hawaii, USA, 2010.12.15-20（ポスター発表）.
- (2) Synthesis and Application of Phosphoroselenoic Acid Esters Derived from Alcohols Possessing a Chiral Carbon Atom Remote from a Hydroxyl Group
Itoh, H.; Murai, T. 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) Selenation of Carbonyl Compounds with Elemental Selenium.
Kubota, S.; Shibahara, F.; Murai, T. The 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), Honolulu, Hawaii, USA, 2010.12.15-20（ポスター発表）.
- (4) Reaction of Phosphorothioic Acid Esters with TBAF Leading to Phosphorothiofluoridic Acid Salts.
Yamada, K.; Murai, T.; Takenaka, T. The 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), Honolulu, Hawaii, USA, 2010.12.15-20（ポスター発表）.
- (5) Radical Addition Reaction of Phosphoroselenoic Acid Esters Bearing a Binaphthyl Group to Alkenes.
Ando, T.; Monzaki, .M.; Murai, T. The 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), Honolulu, Hawaii, USA, 2010.12.15-20（ポスター発表）.
- (6) Introduction of Thionated Esters into Imidazo[1,5-a]pyridines and Their Photophysical Properties.
Onda, I.; Shibahara F.; Murai, T. The 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), Honolulu, Hawaii, USA, 2010.12.15-20（ポスター発表）.
- (7) Introduction of an Alkynyl Group to Imidazo[1,5-a]pyridines and Their Fluorescence.
Douke, Y.; Shibahara, F.; Murai, T. The 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), Honolulu, Hawaii, USA, 2010.12.15-20（ポスター発表）.

(8) Copper-catalyzed Oxidative Sulfidation and Selenidation of Imidazo[1,5-a]pyridines with Elemental Sulfur and Selenium.

Kanai, T.; Yamaguchi, E.; Shibahara, F. Murai, T. The 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), Honolulu, Hawaii, USA, 2010.12.15-20 (ポスター発表).

(9) Three-step Synthesis of Triarylated Azoles through Sequential C-H Bond Arylation Reaction Using Cationic Palladium Complex.

Yamaguchi, E.; Shibahara, F.; Murai, T. The 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), Honolulu, Hawaii, USA, 2010.12.15-20 (口頭発表).

(10) Thionation and Sulfidation Reactions via in situ Reductive or Oxidative Activation of Elemental Sulfur.

Shibahara, F.; Sugiura, R.; Yamaguchi, E.; Kanai, T.; Murai, T. The 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), Honolulu, Hawaii, USA, 2010.12.15-20 (口頭発表).

(11) Synthesis and Properties of Chalcogen-containing Carboxylic and Phosphinic Acid Salts and Their Derivatives.

Murai, T.; Tani, K.; Morishita, K.; Monzaki, M. The 2010 International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), Honolulu, Hawaii, USA, 2010.12.15-20 (口頭発表).

(12) Synthesis and Application of Chalcogen Isologues of Optically Active Phosphoric Acid Derivatives.

Murai, T. The 11th International Chemistry Conference and exhibition in Africa, Luxor, Egypt, 2010.11.20-23 (基調講演).

(13) Thioformamides as Key Substrates for Sequential Addition Reactions.

Murai, T.; Asai, F.; Matsushita, K.; Hori, F. The 6th International Symposium on Intergrated Synthesis (ISIS-6), Maiko Villa Kobe, Kobe, Japan, 2010.10.23-24 (ポスター発表).

(14) Heteroatom-substituted Selenocarbonyl Compounds: Synthesis and Properties.

Murai, T.; Tani, K.; Nonoyama, T.; Nishi, D.; Hori, R. The 11th International Conference on the Chemistry of Selenium and Tellurium Compounds (ICCST-11), Oulu, Finland, 2010.8.1-6 (口頭発表).

(15) Sequential Addition Reaction of Two Different Organometallic Reagents to Thiocarbonyl Compounds.

Murai, T. The 24th International Symposium on the Organic Chemistry of Sulfur (ISOCS-24), Firenze, Italy, 2010.7.25-30 (招待講演).

(16) Thioamide Dianions: Generation and Applications as Carbanions Adjacent to a Nitrogen Atom.

Murai, T. The 9th International Symposium on Carbanion Chemistry (ISCC-9), Firenze, Italy, 2010.7.20-24 (口頭発表).

3. 特許

特になし

4. 学会・シンポジウム等の開催状況

特になし

5. 受賞等

特になし

6. 新聞報道等

特になし

7. 領域内の共同研究の準備・実施状況とその成果

特になし

8. その他特記事項

特になし