

平成23年度 研究業績

依光英樹 (京都大学大学院理学研究科、A03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) Palladium-Catalyzed Alkynylthiolation of Alkynes with Triisopropylsilylethynyl Sulfide
Iwasaki, M.; Fujino, D.; Wada, T.; Kondoh, A.; Yorimitsu, H.;* Oshima, K.* *Chem. Asian J.* **2011**, *6*, 3190–3194.
- (2) Rearrangements of a [36]Octaphyrin Triggered by Nickel(II) Metalation: Metamorphosis to a Directly *meso*- β -Linked Diporphyrin
Tanaka, Y.; Mori, H.; Koide, T.; Yorimitsu, H.; Aratani, N.; Osuka, A.* *Angew. Chem. Int. Ed.* **2011**, *50*, 11460–11464.
- (3) Palladium-Catalyzed β -Selective Direct Arylation of Porphyrins
Kawamata, Y.; Tokuji, S.; Yorimitsu, H.;* Osuka, A.* *Angew. Chem. Int. Ed.* **2011**, *50*, 8867–8870.
- (4) Straightforward access to aryl-substituted tetrathiafulvalenes by palladium-catalysed direct C–H arylation and their photophysical and electrochemical properties
Mitamura, Y.; Yorimitsu, H.;* Oshima, K.;* Osuka, A. *Chem. Sci.* **2011**, *2*, 2017–2021.
- (5) Bis(cyclopentadienyldicarbonyliron) as a Convenient Carbon Monoxide Source in Palladium-Catalyzed Carbonylative Coupling of Aryl Iodides with Amines, Alcohols, and Thiols
Nakaya, R.; Yorimitsu, H.;* Oshima, K.* *Chem. Lett.* **2011**, *40*, 904–906.
- (6) (1-Alkynyl)dicarbonylcyclopentadienylirons as Electron-Rich Alkynes in Organic Synthesis: BF_3 -Mediated [2+2] Cycloaddition/Ring-Opening Providing (2-Alkenyl-1-imino)irons
Nakaya, R.; Yasuda, S.; Yorimitsu, H.;* Oshima, K.* *Chem. Eur. J.* **2011**, *17*, 8559–8561.
- (7) Synthesis of Alkylidenecyclopropanes by Palladium-Catalyzed Reaction of Propargyl-Substituted Malonate Esters with Aryl Halides by Anti-Carbopalladation Pathway
Fujino, D.; Yorimitsu, H.;* Oshima, K.* *J. Am. Chem. Soc.* **2011**, *133*, 9682–9685.
- (8) New Synthetic Strategy for Diporphyrins: Pinacol Coupling–Rearrangement
Tokuji, S.; Maeda, C.; Yorimitsu, H.;* Osuka, A.* *Chem. Eur. J.* **2011**, *17*, 7154–7157.
- (9) Palladium(II)-Triggered Rearrangement of Heptaphyrins to N-Confused Porphyrins
Yoneda, T.; Saito, S.; Yorimitsu, H.; Osuka, A.* *Angew. Chem. Int. Ed.* **2011**, *50*, 3475–3478.
- (10) Allyl-, Allenyl-, and Propargyl-Transfer Reactions through Cleavage of C–C Bonds

Catalyzed by an N-Heterocyclic Carbene/Copper Complex: Synthesis of Multisubstituted Pyrroles

Sai, M.; Yorimitsu, H.;* Oshima, K.* *Angew. Chem. Int. Ed.* **2011**, *50*, 3294–3298.

その他、査読無しの著作

The Chemistry of Organomanganese Ate Complexes

Yorimitsu, H.; Oshima, K. In *The Chemistry of Organomanganese Compounds*; Marek, I., Rappoport, Z., Eds.; *PATAI'S Chemistry of Functional Groups*; John Wiley & Sons: Chichester, 2011; Chapter 10, pp 585-622.

Free Radical Reactions

Yorimitsu, H.; Oshima, K. In *Water in Organic Synthesis*; Kobayashi, S., Ed.; *Science of Synthesis*; Thieme: Stuttgart, 2012; 2011/7, Chapter 5.8, pp 645-677.

Transition Metals and Radicals

Yorimitsu, H. In *Encyclopedia of Radicals in Chemistry, Biology and Materials*; Chatgililoglu, C., Studer, A., Eds.; John Wiley & Sons: Chichester, 2012; Volume 1, Chapter 35, pp 1003-1018.

和文雑誌

HTS で幸運をたぐり寄せる？

依光英樹, *Organometallic News*, **2012**, 26.

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) パラジウム触媒による小員環の構築

依光英樹 金沢大学薬学シンポジウム 2011—有機合成の最前線—, 金沢, 2012.2.10 (招待講演).

(2) 機能性 π 共役系分子周辺部の時空間集積型アリール化

依光英樹 新学術領域研究「反応集積化の合成化学」平成 23 年度第 2 回成果報告会, 大阪, 2012.1.28-29 (依頼講演).

(3) Palladium-Catalyzed Direct Arylation of Functional Aromatics

Yorimitsu, H. 2012 Taiwan-Japan Symposium of Frontier Research on Design and Applications of Fine Chemicals, Taipei, Taiwan, 2012.1.6 (招待講演).

(4) 機能性 π 共役系分子周辺部の直接的多重アリール化

依光英樹 グローバル COE 第八回有機元素化学セミナー, 京都, 2011.11.21-22 (招待講演).

- (5) Palladium-Catalyzed Direct Arylation of Porphyrins
Kawamata, Y.; Tokuji, S.; Yorimitsu, H.; Osuka, A. Yonsei International Symposium on Nano-Bio Molecular Assembly, Seoul, Korea, 2011.10.27-29 (招待講演).
- (6) パラジウム触媒による複数結合の挙構築を基盤とする新分子創製
依光英樹 第38回有機反応懇談会, 大阪, 2011.8.3 (招待講演).
- (7) π 共役系分子の創出を指向した反応開発
依光英樹 愛媛大学工学部応用化学科セミナー第167回ミニシンポジウム, 松山, 2011.7.29 (招待講演).
- (8) Rhodium-Catalyzed Arylzincation of Terminal Allenes Providing Allylzinc Reagents and Its Application to Versatile Three-Component Coupling Reaction
Murakami, K.; Yoshida, Y.; Yorimitsu, H.; Oshima, K. 5th ChemComm International Symposium, Kyoto, 2011.5.16 (ポスター発表).
- (9) Synthesis of Methylenecyclopropanes by Palladium-Catalyzed Reaction of Propargyl-Substituted Malonate Esters with Aryl Halides by Anti-Carbopalladation Pathway
Fujino, D.; Yorimitsu, H.; Oshima, K. 5th ChemComm International Symposium, Kyoto, 2011.5.16 (ポスター発表).
- (10) Palladium(II)-Triggered Rearrangement of Heptaphyrins to N-Confused Porphyrins
Yoneda, T.; Saito, S.; Yorimitsu, H.; Osuka, A. 5th ChemComm International Symposium, Kyoto, 2011.5.16 (ポスター発表).
- (11) Cobalt-Catalyzed Benzylzincation of Alkynes
Murakami, K.; Yorimitsu, H.; Oshima, K. 16th IUPAC International Symposium on Organometallic Chemistry Directed Towards Organic Synthesis, Shanghai, China, 2011.7.24-28 (ポスター発表).
- (12) Synthesis of Methylenecyclopropanes by Palladium-Catalyzed Reaction of Propargyl-Substituted Malonate Esters with Aryl Halides by Anti-Carbopalladation Pathway
Fujino, D.; Yorimitsu, H.; Oshima, K. 16th IUPAC International Symposium on Organometallic Chemistry Directed Towards Organic Synthesis, Shanghai, China, 2011.7.24-28 (ポスター発表).
- (13) Palladium(II)-Triggered Rearrangement of Heptaphyrins to N-Confused Porphyrins
Yoneda, T.; Saito, S.; Yorimitsu, H.; Osuka, A. 14th International Symposium on Novel Aromatic Compounds, Eugene, Oregon, USA, 2011.7.24-29 (ポスター発表).
- (14) Synthesis of Porphyrin Dimers via Pinacol Coupling–Rearrangement
Tokuji, S.; Maeda, C.; Yorimitsu, H.; Osuka, A. 14th International Symposium on Novel

- Aromatic Compounds, Eugene, Oregon, USA, 2011.7.24-29 (ポスター発表).
- (15) Silver-Catalyzed Benzoylation and Allylation of Tertiary Alkyl Bromides with Organozinc Reagents
Mitamura, Y.; Asada, Y.; Murakami, K.; Someya, H.; Yorimitsu, H.; Oshima, K. 5th Pacific Symposium on Radical Chemistry, Shirahama, 2011.9.25-28 (ポスター発表).
- (16) Intramolecular Reductive Addition to 2-(2,2,2-Trifluoroethylidene)-1,3-dithiane 1-Oxide: Experimental and Theoretical Studies
Nakayama, R.; Mastubara, H.; Fujino, D.; Kobatake, T.; Yoshida, S.; Yorimitsu, H.; Oshima, K. 5th Pacific Symposium on Radical Chemistry, Shirahama, 2011.9.25-28 (ポスター発表).
- (17) Synthesis of Porphyrins Dimers by Sequential SmI₂-Promoted Pinacol Coupling and Acid-Mediated Rearrangement
Tokuji, S.; Maeda, C.; Yorimitsu, H.; Osuka, A. 5th Pacific Symposium on Radical Chemistry, Shirahama, 2011.9.25-28 (ポスター発表).
- (18) Palladium-Catalyzed Direct Arylation of Porphyrins
Kawamata, Y.; Tokuji, S.; Yorimitsu, H.; Osuka, A. 7th International Symposium on Integrated Synthesis, Kobe, Japan, 2011.10.9-10 (ポスター発表).
- (19) Synthesis of Porphyrin Dimers via Pinacol Coupling–Rearrangement
Tokuji, S.; Maeda, C.; Yorimitsu, H.; Osuka, A. Yonsei International Symposium on Nano-Bio Molecular Assembly, Seoul, Korea, 2011.10.27-29 (口頭発表).
- (20) Palladium(II)-Triggered Rearrangement of Heptaphyrins to N-Confused Porphyrins
Yoneda, T.; Saito, S.; Yorimitsu, H.; Osuka, A. Yonsei International Symposium on Nano-Bio Molecular Assembly, Seoul, Korea, 2011.10.27-29 (口頭発表).
- (21) Synthesis of Methylenecyclopropanes by Palladium-Catalyzed Reaction of Propargyl-Substituted Malonate Esters with Aryl Halides by Anti-Carbopalladation Pathway
Fujino, D.; Yorimitsu, H.; Oshima, K. Yonsei International Symposium on Nano-Bio Molecular Assembly, Seoul, Korea, 2011.10.27-29 (口頭発表).
- (22) Rhodium-Catalyzed Arylzincation of Terminal Allenes Providing Allylzinc Reagents and Its Application to Versatile Three-Component Coupling Reaction
Murakami, K.; Yoshida, Y.; Yorimitsu, H.; Oshima, K. Yonsei International Symposium on Nano-Bio Molecular Assembly, Seoul, Korea, 2011.10.27-29 (口頭発表).

3. 特許

該当なし

4. 学会・シンポジウム等の開催状況

(1) 5th Pacific Symposium on Radical Chemistry, 白浜, 2011.9.25-28, 依光英樹, 事務局長

5. 受賞等

(1) 依光英樹 (A03 班, 公募班員)

平成 23 年度科学技術分野の文部科学大臣表彰若手科学者賞 文部科学省、
2011.4.20

(2) 岩崎真之 (現岡山大学大学院自然科学研究科助教)

2011 Reaxys PhD Prize Finalist Elsevier, 2011.5.26 [受賞対象の博士論文の共著者]

(3) 村上慧 (博士 3 年)

Best ChemCommun Poster Prize 5th ChemComm International Symposium, 2011.5.16

(4) 藤野大士 (博士 1 年)

IUPAC Best Poster Award 16th IUPAC International Symposium on Organometallic
Chemistry Directed Towards Organic Synthesis, 2011.7.24-28

6. 新聞報道等

該当なし

7. 国民との科学・技術対話

該当なし

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