

## List of publications (Kazuhiro Okamoto)

査読付き原著論文

論文数：51 総引用数：3396 h 指標：29 i10 指標：42 (Data source: Google Scholar; Oct 1, 2024)

51. “Defluorinative Functionalization Approach led by Difluoromethyl Anion Chemistry”  
Kensuke Muta, Kazuhiro Okamoto, Hiroki Nakayama, Shuto Wada, and Aiichiro Nagaki\*  
*Nat. Commun.*, in press.
50. “Elucidation of the kinetic stabilities of carbenoid species by integration of theoretical and experimental studies”  
Kazuhiro Okamoto, Kensuke Muta, Hidetaka Yamada, Ryosuke Higuma, Yosuke Ashikari, and Aiichiro Nagaki\*  
*React. Chem. Eng.* **2024**, *9*, 1173-1178 (doi: 10.1039/d3re00648d).
49. “Flowmicro In-Line Analysis-Driven Design of Reactions mediated by Unstable Intermediates: Flash Monitoring Approach”  
Yosuke Ashikari, Rikako Yoshioka, Yuya Yonekura, Dong-eun Yoo, Kazuhiro Okamoto, and Aiichiro Nagaki\*  
*Chem. Eur. J.* **2024**, *30*, e202303774 (doi: 10.1002/chem.202303774).
48. “Reactions of Highly Volatile Organic Compounds with Organolithium Species in Flow Microreactor”  
Kensuke Muta, Kazuhiro Okamoto, and Aiichiro Nagaki\*  
*Synlett*, in press (doi: 10.1055/a-2170-2976).
47. “External Flash Generation of Carbenoids Enables Monodeuteration of Dihalomethanes”  
Kazuhiro Okamoto, Ryosuke Higuma, Kensuke Muta, Keita Fukumoto, Yuta Tsuchihashi, Yosuke Ashikari, and Aiichiro Nagaki\*  
*Chem. Eur. J.* **2023**, *29*, e202301738.
46. “Properties and Reactivities of Zwitterionic Platinum(II)-ate Complexes Generated by Transforming Coordination of Alkyne-Bisphosphine Ligand”  
Kazuhiro Okamoto,\* Kohei Sasakura, Satoshi Funasaka, Hiiro Watanabe, Masahiro Suezaki, and Kouichi Ohe\*  
*Organometallics.* **2021**, *40*, 848–856.
45. “Bimetallic Reactivities of Dinuclear Iridium and Rhodium Complexes Generated from Two Types of Alkyne-Containing Bisphosphine Ligands”  
Kohei Sasakura, Kazuhiro Okamoto,\* and Kouichi Ohe\*  
*Eur. J. Inorg. Chem.* **2020**, 1894–1901.
44. “The Reaction Pathway Leading to Dinuclear Rhodium and Iridium Complexes from Alkyne-containing Bisphosphine Ligands”  
Kohei Sasakura, Kazuhiro Okamoto,\* Shigeyoshi Sakaki, and Kouichi Ohe\*  
*Bull. Chem. Soc. Jpn.* **2020**, *93*, 794–798.
43. “Divergent Catalytic Approach from Cyclic Oxime Esters to Nitrogen-Containing Heterocycles with Group 9 Metal Catalysts”  
Takuya Shimbayashi, Gaku Matsushita, Atsushi Nanya, Akira Eguchi, Kazuhiro Okamoto,\* and Kouichi Ohe\*  
*ACS Catal.* **2018**, *8*, 7773–7780.
42. “Incorporation of Monatomic Cations onto an Ir–Ir Bond in a Dimeric Iridium(II) Complex Having a 1,3-Diene-1,4-diyl Backbone”  
Kohei Sasakura, Kazuhiro Okamoto,\* and Kouichi Ohe\*

*Organometallics* **2018**, *37*, 2319-2324.

41. "Palladium-Catalyzed Selective Formation of Substituted Pyrroles from Alkene-tethered Cyclic Oxime Esters"  
Kazuhiro Okamoto,\* Tomohiro Oda, Gaku Matsushita, Takuya Shimbayashi, Kohei Sasakura, and Kouichi Ohe\*  
*Heterocycles* **2018**, *97*, 218-231.
40. "Facile Construction of Tetrahydropyrrolizines by Iron-Catalyzed Double Cyclization of Alkene-Tethered Oxime Esters with 1,2-Disubstituted Alkenes"  
Takuya Shimbayashi, Daiki Nakamoto, Kazuhiro Okamoto,\* and Kouichi Ohe\*  
*Org. Lett.* **2018**, *20*, 3044-3048.
39. "Iron-Catalyzed Aminative Cyclization/Intermolecular Homolytic Aromatic Substitution Using Oxime Esters and Simple Arenes"  
Takuya Shimbayashi, Kazuhiro Okamoto,\* and Kouichi Ohe\*  
*Chem.—Asian J.* **2018**, *13*, 395-399. *Selected as cover picture.*
38. "Asymmetric Synthesis of 2*H*-Azirines with Tetrasubstituted Stereocenters by Enantioselective Ring-Contraction of Isoxazoles"  
Kazuhiro Okamoto,\* Atsushi Nanya, Akira Eguhi, and Kouichi Ohe\*  
*Angew. Chem. Int. Ed.* **2018**, *57*, 1039-1043.  
*Selected as Very Important Paper and inside back cover picture. Highlighted in Synfacts.*
37. "Generation of Stable Ruthenium(IV)–Ketimido Complexes via Oxidative Addition of Oxime Esters to Ruthenium(II): Reactivity Studies Based on Electronic Properties of the Ru–N Bond"  
Takuya Shimbayashi, Kazuhiro Okamoto,\* and Kouichi Ohe\*  
*Chem.—Eur. J.* **2017**, *23*, 16892-16897.
36. "Copper-Catalyzed Regio- and Stereoselective Iodocyanation and Dicyanation of Alkynes with Cyanogen Iodide"  
Naoki Sakata, Kohei Sasakura, Gaku Matsushita, Kazuhiro Okamoto,\* and Kouichi Ohe\*  
*Org. Lett.* **2017**, *19*, 3422-3425.
35. "Radical-Polar-Crossover Reactions of Vinyl Boron-Ate Complexes"  
Marvin Kischkewitz, Kazuhiro Okamoto, Christian Mück-Lichtenfeld, and Armido Studer\*  
*Science* **2017**, *355*, 936-938.
34. "Ruthenium-catalyzed Decarboxylative and Dehydrogenative Formation of Highly Substituted Pyridines from Alkene-tethered Isoxazol-5(4*H*)-ones"  
Kazuhiro Okamoto,\* Kohei Sasakura, Takuya Shimbayashi, and Kouichi Ohe\*  
*Chem. Lett.* **2016**, *45*, 988-990.
33. "C–H Activation Induced by Oxidative Addition of N–O Bonds in Oxime Esters: Formation of Rhodacycles and Cycloaddition with Alkynes"  
Takuya Shimbayashi, Kazuhiro Okamoto,\* and Kouichi Ohe\*  
*Organometallics* **2016**, *35*, 2026-2031.
32. "Synthesis of 2*H*-Azirines by Iridium-Catalyzed Decarboxylative Ring Contraction of Isoxazol-5(4*H*)-ones"  
Kazuhiro Okamoto,\* Takuya Shimbayashi, Masato Yoshida, Atsushi Nanya, and Kouichi Ohe\*  
*Angew. Chem. Int. Ed.* **2016**, *55*, 7199-7202.
31. "Iridium-Catalyzed [2+2] Cycloaddition of Allylsilanes to Internal Alkynes"  
Kazuhiro Okamoto,\* Takuya Shimbayashi, Eisuke Tamura, and Kouichi Ohe\*  
*Org. Lett.* **2015**, *17*, 5843-5845.
30. "Copper-Catalyzed Cyanation of Aryl- and Alkenylboronic Reagents with Cyanogen Iodide"  
Kazuhiro Okamoto,\* Naoki Sakata, and Kouichi Ohe\*

- Org. Lett.* **2015**, *17*, 4670-4673.
29. "Palladium-Catalyzed Three-Component Coupling Reactions of 2-(Cyanomethyl)phenol, Aryl Halides and Carbon Monoxide"  
Masahito Murai, Kazuhiro Okamoto, Koji Miki, and Kouichi Ohe\*  
*Tetrahedron* **2015**, *71*, 4432-4437.
  28. "Stereoselective Construction of 1,3-Disilylcyclopentane Derivatives by Scandium-catalyzed [3+2] Cycloaddition of Allylsilanes to  $\beta$ -Silylenones"  
Kazuhiro Okamoto,\* Eisuke Tamura, and Kouichi Ohe\*  
*Angew. Chem. Int. Ed.* **2014**, *53*, 10195-10199.
  27. "Synthesis of Imidazoles and Pyrimidines Using Palladium-catalyzed Decarboxylative Intramolecular Condensation of 1,2,4-Oxadiazol-5(4*H*)-ones"  
Takuya Shimbayashi, Kazuhiro Okamoto,\* and Kouichi Ohe\*  
*Synlett* **2014**, *25*, 1916-1920.
  26. "Palladium-Catalyzed Decarboxylative Aza-Wittig-Type Condensation of Isoxazol-5(4*H*)-ones with Aldehydes"  
Kazuhiro Okamoto,\* Takuya Shimbayashi, Eisuke Tamura, and Kouichi Ohe\*  
*Chem.—Eur. J.* **2014**, *20*, 1490-1494. *Selected as frontispiece.*
  25. "Copper-catalyzed C—H Cyanation of Terminal Alkynes with Cyanogen Iodide"  
Kazuhiro Okamoto,\* Masahito Watanabe, Naoki Sakata, Masahito Murai, and Kouichi Ohe\*  
*Org. Lett.* **2013**, *15*, 5810-5813.
  24. "Acid-Catalyzed Direct Conjugate Alkenylation of  $\alpha,\beta$ -Unsaturated Ketones"  
Kazuhiro Okamoto,\* Eisuke Tamura, and Kouichi Ohe\*  
*Angew. Chem. Int. Ed.* **2013**, *52*, 10639-10643.
  23. "Rhodium-Catalyzed Ring-Opening Reaction of 2*H*-Azirines via Furylcarbene Complexes Generated from Carbonyl-ene-yne Compounds"  
Kazuhiro Okamoto,\* Masahito Watanabe, Ayano Mashida, Koji Miki, and Kouichi Ohe\*  
*Synlett* **2013**, *24*, 1541-1544.
  22. "Alkyne-Coordinating Tridentate Ligands: Structural Properties and Reactivity of Their Rhodium Complexes"  
Kazuhiro Okamoto,\* Yusuke Omoto, Hayato Sano, and Kouichi Ohe\*  
*Dalton Trans.* **2012**, *41*, 10926-10929.
  21. "Gold-catalysed Cycloisomerisation Reactions of 2-(2-Propynyl)pyridine *N*-Oxides Leading to Indolizinones"  
Masahito Murai, Sachie Kitabata, Kazuhiro Okamoto, and Kouichi Ohe\*  
*Chem. Commun.* **2012**, *48*, 7622-7624.
  20. "An Unexpected Disproportional Reaction of 2*H*-Azirines Giving (1*E*,3*Z*)-2-Aza-1,3-dienes and Aromatic Nitriles in the Presence of Nickel Catalysts"  
Kazuhiro Okamoto, Ayano Mashida, Masahito Watanabe, and Kouichi Ohe\*  
*Chem. Commun.* **2012**, *48*, 3554-3556.
  19. "Practical Synthesis of Aromatic Nitriles via Gallium-catalysed Electrophilic Cyanation of Aromatic C—H Bonds"  
Kazuhiro Okamoto, Masahito Watanabe, Masahito Murai, Ryo Hatano, and Kouichi Ohe\*  
*Chem. Commun.* **2012**, *48*, 3127-3129.
  18. "Palladium-Catalyzed Decarboxylative Intramolecular Aziridination from 4*H*-Isoxazol-5-ones Leading to 1-Azabicyclo[3.1.0]hex-2-enes"  
Kazuhiro Okamoto, Tomohiro Oda, Sho Kohigashi, and Kouichi Ohe\*  
*Angew. Chem. Int. Ed.* **2011**, *50*, 11470-11473.

17. "Rhodium-catalyzed Carbene Transfer Reactions via Thienylcarbene Complexes Generated from Thiocarbamoyl-ene-yne Compounds"  
Asuka Tsuneishi, Kazuhiro Okamoto, Yuji Ikeda, Masahito Murai, Koji Miki, and Kouichi Ohe\*  
*Synlett* **2011**, 655-658.
16. "Rhodium-Catalyzed Asymmetric Addition of Arylboronic Acids to  $\beta$ -Phthaliminoacrylate Esters toward the Synthesis of  $\beta$ -Amino Acids"  
Takahiro Nishimura\*, Jun Wang, Makoto Nagaosa, Kazuhiro Okamoto, Ryo Shintani, Fuk-yeek Kwong, Wing-yiu Yu, Albert S. C. Chan, and Tamio Hayashi\*  
*J. Am. Chem. Soc.* **2010**, *132*, 464-465.
15. "Electronic and Steric Tuning of Chiral Diene Ligands for Rhodium-Catalyzed Asymmetric Arylation of Imines"  
Kazuhiro Okamoto, Tamio Hayashi,\* and Viresh H. Rawal  
*Chem. Commun.* **2009**, *45*, 4815-4817.
14. "Simple Chiral Diene Ligands Provide High Enantioselectivities in Transition-Metal-Catalyzed Conjugate Addition Reactions"  
Kazuhiro Okamoto, Tamio Hayashi,\* and Viresh H. Rawal  
*Org. Lett.* **2008**, *10*, 4387-4389.
13. "Rhodium/Chiral Diene-Catalyzed Asymmetric 1,4-Addition of Arylboronic Acids to Arylmethylene Cyanoacetates"  
Sebastian Sörgel, Norihito Tokunaga, Keigo Sasaki, Kazuhiro Okamoto, and Tamio Hayashi\*  
*Org. Lett.* **2008**, *10*, 589-592.
12. "Platinum-Catalyzed Addition of Silylenes from Hydrodisilanes and Their Addition to  $\alpha,\beta$ -Unsaturated Ketones"  
Kazuhiro Okamoto and Tamio Hayashi\*  
*Chem. Lett.* **2008**, *37*, 108-109.
11. "Platinum-Catalyzed Addition of Dimethylsilylene to  $\beta$ -Methyl  $\alpha,\beta$ -Unsaturated Ketones:  $\gamma$ -Silylation Forming 1-Oxa-2-silacyclohex-5-enes"  
Kazuhiro Okamoto and Tamio Hayashi\*  
*Org. Lett.* **2007**, *9*, 5067-5069.
  
10. "Rhodium-Catalyzed Asymmetric Synthesis of Indanones: Development of a New Axially-Chiral Bisphosphine Ligand"  
Ryo Shintani, Keishi Yashio, Tomoaki Nakamura, Kazuhiro Okamoto, Toyoshi Shimada, and Tamio Hayashi\*  
*J. Am. Chem. Soc.* **2006**, *128*, 2772-2773.
9. "Asymmetric 1,4-Addition of Arylboronic Acids to  $\alpha,\beta$ -Unsaturated Aldehydes Catalyzed by a Chiral Diene-Rhodium Complex"  
Tamio Hayashi\*, Norihito Tokunaga, Kazuhiro Okamoto, and Ryo Shintani  
*Chem. Lett.* **2005**, *34*, 1480-1481.
8. "Palladium/Chiral Phosphine-Olefin Complexes: X-ray Crystallographic Analysis and the Use in Catalytic Asymmetric Allylic Alkylation"  
Ryo Shintani, Wei-Liang Duan, Kazuhiro Okamoto, and Tamio Hayashi\*

*Tetrahedron: Asymmetry* **2005**, *16*, 3400-3405.

7. “Carbon-Carbon Bond-Forming Enantioselective Synthesis of Chiral Organosilicon Compounds by Rhodium/Chiral Diene-Catalyzed Asymmetric 1,4-Addition Reaction”  
Ryo Shintani, Kazuhiro Okamoto, and Tamio Hayashi\*  
*Org. Lett.* **2005**, *7*, 4757-4759.
6. “Rhodium-Catalyzed Synthesis of Indenols by Regioselective Coupling of Alkynes with Ortho-carbonylated Arylboronic Acids”  
Ryo Shintani, Kazuhiro Okamoto, and Tamio Hayashi\*  
*Chem. Lett.* **2005**, *34*, 1294-1295.
5. “Rhodium/Chiral Diene-Catalyzed Highly Chemo- and Enantioselective Arylative Cyclization of Alkyne-Tethered Electron-Deficient Olefins”  
Ryo Shintani, Akihiro Tsurusaki, Kazuhiro Okamoto, and Tamio Hayashi\*  
*Angew. Chem., Int. Ed.* **2005**, *44*, 3909-3912.
4. “Preparation of  $C_2$ -Symmetric Bicyclo[2.2.2]octa-2,5-diene Ligands and Their Use for Rhodium-Catalyzed Asymmetric 1,4-Addition of Arylboronic Acids”  
Yusuke Otomaru, Kazuhiro Okamoto, Ryo Shintani, and Tamio Hayashi\*  
*J. Org. Chem.* **2005**, *70*, 2503-2508.
3. “Rhodium-Catalyzed Isomerization of  $\alpha$ -Arylpropargyl Alcohols to Indanones: Involvement of an Unexpected Reaction Cascade”  
Ryo Shintani, Kazuhiro Okamoto, and Tamio Hayashi\*  
*J. Am. Chem. Soc.* **2005**, *127*, 2872-2873.
2. “Catalytic Asymmetric Arylative Cyclization of Alkynes: Phosphine-Free Rhodium/Diene Complexes as Efficient Catalysts”  
Ryo Shintani, Kazuhiro Okamoto, Yusuke Otomaru, Kazuhito Ueyama, and Tamio Hayashi\*  
*J. Am. Chem. Soc.* **2005**, *127*, 54-55.
1. “ $C_2$ -Symmetric Bicyclo[2.2.2]octadienes as Chiral Ligands: Their High Performance in Rhodium-Catalyzed Asymmetric Arylation of *N*-Tosylarylimines”  
Norihito Tokunaga, Yusuke Otomaru, Kazuhiro Okamoto, Kazuhito Ueyama, Ryo Shintani, and Tamio Hayashi\*  
*J. Am. Chem. Soc.* **2004**, *126*, 13584-13585.

#### 著書・総説・解説記事（英文）

- R4. “Flow Chemistry of Metal Carbenoid Species towards Selective Organic Synthesis”  
Kazuhiro Okamoto\* and Aiichiro Nagaki\*  
*Synthesis* **2024**, in press (doi: 10.1055/a-2302-5363).
- R3. “Synthesis of Deuterated Compounds by Flow Chemistry”  
Shintaro Kamio, Kazuhiro Okamoto, Takehiro Yamagishi, and Aiichiro Nagaki\*  
*ChemPlusChem* **2024**, e202300744.
- R2. “Product Class 4.4.40.72: Allylsilanes”  
Kazuhiro Okamoto and Kouichi Ohe  
*Science of Synthesis Knowledge Updates*  
Vol. 2020/1, Section 4.4.40.72, pp.1–158 (2020).
- R1. “Recent Progress on Cyclic Nitrenoid Precursors in Transition-metal-catalyzed Nitrene-transfer Reactions”

Takuya Shimbayashi, Kohei Sasakura, Akira Eguchi, Kazuhiro Okamoto,\* and Kouichi Ohe\*  
*Chem.—Eur. J.* **2019**, *25*, 3156-3180.

著書・総説・解説記事（邦文）

- J11. 「連続フロー法による有機合成とその事例」  
岡本和紘, 永木愛一郎  
医薬品、ファインケミカルの連続生産 第1章12節, 技術情報協会 2024.
- J10. 「有機リチウム化合物発生におけるフロー選択性制御と反応開発」  
岡本和紘, 永木愛一郎  
月刊ファインケミカル 2024年7月号「フロー・マイクロ合成—次世代合成の最前線—」
- J9. 「ベイズ最適化を活用したフロー合成研究事例」  
玉木孝, 岡本和紘, 永木愛一郎  
*PHARMSTAGE* **2023**, *23*, 13–18.
- J8. 「フロー研究が導く有機化学の高速化」  
永木愛一郎, 岡本和紘  
*Organometallic News* **2023**, 94-99. (トピックス)
- J7. 「AIによるフロー合成の反応条件最適化」  
永木愛一郎, 岡本和紘  
ケモインフォマティクスにおけるデータ収集の最適化と解析手法 第5章7節, 技術情報協会 2023.
- J6. 「古くて新しい2*H*-アジリンの化学—選択的合成及び変換反応」  
岡本和紘, 江口 輝, 大江浩一  
有機合成化学協会誌 **2020**, *78*, 1126-1137. (総説)
- J5. 「遷移金属触媒と含窒素有機活性種の多様性を利用した有機合成」  
岡本和紘  
化学と工業 **2019**, *73*, 882-883. (飛翔する若手研究者)
- J4. 「ビニルボロン酸アート錯体のラジカル-極性交差反応」  
岡本和紘  
*Science—Japanese Scientists in Science 2017*, **2018**, 19.
- J3. 「高い選択性制御を可能にするケイ素置換の効果—複雑な分子の一挙構築を目指して」  
大江浩一, 岡本和紘  
化学 (化学同人) **2015**, *70*, 68-69. (最新のトピックス)
- J2. 「触媒反応における複核構造の直接的推定手法」  
岡本和紘  
*Organometallic News* **2013**, 110. (有機金属ハイライト)
- J1. 「パラジウム触媒によるアルケンの原子効率的カルボハロゲン化反応」  
岡本和紘  
有機合成化学協会誌 **2012**, *70*, 852-853. (Review de Deview)