

Publication List

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Sum of the Times Cited: **11685** h-index: **53** (by Scopus)

Representative publications

1. "Divergent Transformations of Aromatic Esters: Decarbonylative Coupling, Ester Dance, Aryl Exchange, and Deoxygenative Coupling"
Kubo, M.; Yamaguchi, J.*
Acc. Chem. Res. **2024**, 57, 1747–1760. (Account)
2. "Repurposing carboxylic acids and alcohols/amines to create α-hydroxy/amino ketones"
Ishihara, Y.; Yamaguchi, J.*
Chem **2023**, 9, 1630–1632 (Review).
3. "Unified Synthesis of Multiply Arylated Alkanes by Catalytic Deoxygenative Transformation of Diarylketones"
Kurosawa, M. B.; Kato, K.; Muto, K.; Yamaguchi, J.*
Chem. Sci. **2022**, 13, 10743–10751.
4. "Catalytic reductive ring opening of epoxides enabled by zirconocene and photoredox catalysis"
Aida, K.; Hirao, M.; Funabashi, A.; Sugimura, N.; Ota, E.*; Yamaguchi, J.*
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Komatsuda, M.; Suto, A.; Kondo Jr. H.; Takada, H.; Kato, K.; Saito, M.; Yamaguchi, J.*
Chem. Sci. **2022**, 13, 665–670.
6. "Convergent Azaspirocyclization of Bromoarenes with NTosylhydrazones by a Palladium Catalyst"
Yanagimoto, A.; Uwabe, Y.; Wu, Q.; Muto, K.*; Yamaguchi, J.*
ACS Catal. **2021**, 11, 10429–10435.
7. "Ni-Catalyzed Aryl Sulfide Synthesis through an Aryl Exchange Reaction"
Isshiki, R.; Kurosawa, M. B.; Muto, K.; Yamaguchi, J.*
J. Am. Chem. Soc. **2021**, 143, 10333–10340.
8. "Transition-Metal-Catalyzed Denitrative Coupling of Nitroarenes"
Muto, K.; Okita, T.; Yamaguchi, J.*
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9. "Catalytic Three-component C–C Bond Forming Dearomatization of Bromoarenes with Malonates and Diazo Compounds"
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10. "Ester Dance Reaction on the Aromatic Ring"
Matsushita, K.; Takise, R.; Muto, K.; Yamaguchi, J.*
Science Advances **2020**, 6, eaba7614.
11. "σ -Bond Hydroboration of Cyclopropanes"
Kondo H.; Miyamura, S.; Matsushita, K.; Kato, H.; Kobayashi, C.; Arifin; Itami, K.; Yokogawa, D.*; Yamaguchi, J.*
J. Am. Chem. Soc. **2020**, 142, 11306–11313.
12. "Catalytic Deoxygenative Coupling of Aromatic Esters with Organophosphorus Compounds"
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16. "Casein kinase 1 family regulates PRR5 and TOC1 in the Arabidopsis circadian clock"
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Proc Natl Acad Sci USA **2019**, 116, 11528–11536.
17. "Synthesis of Octaaryl Naphthalenes and Anthracenes with Different Substituents"
Suzuki, S.; Itami, K.*; Yamaguchi, J.*
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18. "Cross-coupling of Aromatic Esters and Amides"
Takise, R.; Muto, K.; Yamaguchi, J.*
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19. "Rh-catalyzed Regiodivergent Hydrosilylation of Acyl Aminocyclopropanes Controlled by Monophosphine Ligands"
Kondo, H.; Itami, K.; Yamaguchi, J.*
Chem. Sci. **2017**, 8, 3799–3803.
20. "Decarbonylative Diaryl Ether Synthesis by Pd and Ni Catalysis"
Takise, R.; Isshiki, R.; Muto, K.; Itami, K.*; Yamaguchi, J.*
J. Am. Chem. Soc. **2017**, 139, 3340–3343.
21. "C–H Arylation and Alkenylation of Imidazoles by Nickel Catalysis: Solvent-accelerated Imidazole C–H Activation"
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22. "Decarbonylative Organoboron Cross-coupling of Esters by Nickel Catalysis"
Muto, K.; Yamaguchi, J.*; Musaev, D. G.*; Itami, K.*
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23. "C–H Activation Generates Period-Shortening Molecules That Target Cryptochrome in the Mammalian Circadian Clock"
Oshima, T.; Yamanaka, I.; Kumar, A.; Yamaguchi, J.; Nishiwaki Ohkawa, T.; Muto, K.; Kawamura, R.; Hirota, T.; Yagita, K.; Irle, S.; Kay, S. A.; Yoshimura, T.*; Itami, K.*
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24. "Synthesis and Characterization of Hexaarylbenzenes with Five or Six Different Substituents Enabled by Programmed Synthesis"
Suzuki, S.; Segawa, Y.; Itami, K.*; Yamaguchi, J.*
Nature Chem. **2015**, 7, 227–233.
25. "Concise Syntheses of Dictyodendrins A and F by a Sequential C–H Functionalization Strategy"
Yamaguchi, A. D.; Chepiga, K. M.; Yamaguchi, J.*; Itami, K.*; Davies, H. M. L.
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26. "Stereodivergent Synthesis of Arylcyclopropylamines by Sequential C–H Borylation and Suzuki–Miyaura Coupling"
Miyamura, S.; Araki, M.; Suzuki, T.; Yamaguchi, J.*; Itami, K.*
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27. "Key Mechanistic Features of the Ni-catalyzed C–H/C–O Biaryl Coupling with Azoles and NaphthalenylPivalates"
Xu, H. Muto, K.; Yamaguchi, J.; Itami, K.*; Musaev, D.G.*
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28. "β-Selective C–H Arylation of Pyrroles: Leading to Concise Syntheses of Lamellarins C and I"
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29. “Ni-Catalyzed α -Arylation of Ketones with Phenol Derivatives”
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30. “Aromatic C–H Coupling with Hindered Arylboronic Acids by Pd/Fe Dual Catalysts”
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32. “C–H Alkenylation of Azoles with Enols and Esters by Nickel Catalysis”
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Yamaguchi, K.; Kondo, H.; Yamaguchi, J.*; Itami, K.*
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34. “C–H Bond Functionalization: Emerging Synthetic Tools for the Synthesis of Natural Products and Pharmaceuticals”
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35. “Decarbonylative C–H Coupling of Azoles and Aryl Esters: Unprecedented Nickel Catalysis and Application to the Synthesis of Muscoride A”
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J. Am. Chem. Soc. **2011**, *133*, 19660–19663.

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1. *2H-Thiazolo[4,5-*d*][1,2,3]triazole: Synthesis, Functionalization, and Application in Scaffold-Hopping*
Miyazaki, R. Takada, F.; Kikuchi, T.; Oguro, Y.; Kamata M.; Yukawa, T.; Kato, K.; Muto, K.;* Yamaguchi, J.*
2024, submitted.
2. “Deoxygenative Functionalizations of Aromatic Dicarbonyls and Aldehydes”
Sakihara, M.; Shimoyama, S.; Kurosawa, M. B. Yamaguchi, J.*
2024, submitted.
3. “Pd-catalyzed dearomatic functionalization of arenes”
Muto K.; Yamaguchi, J.
2024, submitted.
4. “Pd-Catalyzed Dearomatic Functionalizations of Benzyl and Aryl Electrophiles”
Kato, H; Muto, K.; Yamaguchi, J.*
2024, submitted.

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Published on Preprint Server

1. "Cine-Substitution of Enolates: Enolate Dance/Coupling of Cycloalkenyl Pivalates by Nickel Catalysis"
Moriya, E.; Muto, K.; Yamaguchi, J.
ChemRxiv. 2024.
2. "Versatile Deacylative Cross-coupling of Aromatic Ketones"
Nakahara, H.; Isshiki, R.; Kubo, M.; Iizumi, K.; Muto, K.; Yamaguchi, J.
ChemRxiv. 2024.
3. "Catalytic Reductive Homocoupling of Benzyl Chlorides Enabled by Zirconocene and Photoredox Catalysis"
Tajima, R.; Tanaka, K.; Aida, K.; Ota, E.; Yamaguchi, J.
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1. "Divergent Transformations of Aromatic Esters: Decarbonylative Coupling, Ester Dance, Aryl Exchange, and Deoxygenative Coupling"
Kubo, M.; Yamaguchi, J.*
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2. "Harnessing Zirconocene (III) for Photoinduced Carbon Radical Generation"
Ota, E.*; Aida, K.; Yamaguchi, J.*
Chem. Lett. 2024, 53, upae095 (Short Review).
3. "Deoxygenative Hetero- and Carbofunctionalizations of Diarylketones"
Sakihara, M.; Kurosawa, M. B.; Watanabe, M.; Shimoyama, S.; Yamaguchi, J.*
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[Most Read Articles in May 2024](#).
4. "Ring-opening Difluorination of Pyrazoloazines"
Ohki, H.; Komatsuda, M.; Kondo Jr., H.; Yamaguchi, J.*
Tetrahedron 2024, 159, 134020.
[In honour of Professor Thomas Maimone, 2024 Tetrahedron Young Investigator Award in Organic Synthesis](#)
5. "Palladium-Catalyzed Denitrative Synthesis of Aryl Nitriles from Nitroarenes and Organocyanides"
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6. "Pd-Catalyzed Cyclization/1,4-Difunctionalization of Bromoarenes with Diazo Compounds Leading to Bicyclic Skeletons"
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7. "Regioselective Ring Opening of Oxetanes Enabled by Zirconocene and Photoredox Catalysis"
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[Highlighted in cluster 11th Singapore International Chemistry Conference \(SICC-11\)](#)
8. "A unique small molecule pair controls the plant circadian clock"
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Plant Cell Physiol 2023, e202302769.
[Selected as a CoverArt](#)
9. "Concise synthesis of (\pm)-fortuneicyclidins and (\pm)-cephalotine B enabled by Pd-catalyzed dearomatic spirocyclization"
Uwabe, Y.; Muto, K.*; Yamaguchi, J.*
Chem. Eur. J. 2023, e202302769
[Selected as a CoverArt](#)
10. "Repurposing carboxylic acids and alcohols/amines to create a-hydroxy/amino ketones"
Ishihara, Y.; Yamaguchi, J.*

- Chem** **2023**, *9*, 1630–1632 (Review).
11. “Development of Plant Circadian Clock Modulators”
Saito, A. N.; Ota, E.; Nakamichi, N.; Yamaguchi, J.
J. Synth. Org. Chem. Jpn **2023**, *81*, 718–730.
12. “Chloroacetyl boronate N-tosylhydrazone as a versatile synthetic building block”
Miyazaki, R.; Muto, K.; Yamaguchi, J.
Chem. Commun. **2023**, *59*, 7419–7422. (Invited contribution)
13. “Pd-Catalyzed Denitriative Intramolecular Mizoroki–Heck Reaction”
Asahara, K. K.; Muto, K. Yamaguchi, J.*
Chem. Lett. **2023**, *52*, 299–302.
14. “Activation of Alkyl Chlorides Enabled by Zirconocene and Photoredox Catalysis”
Okita, T.; Aida, K.; Tanaka, K.; Ota, E.*; Yamaguchi, J.*
Precis. Chem. **2023**, *1*, 112–118.
15. “Ring-opening Fluorination of Carbo/Heterocycles and Aromatics: Construction of Complex and Diverse Fluorine-containing Molecules”
Komatsuda, M.; Yamaguchi, J.*
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16. “Aryl Dance Reaction of Arybenzoheteroles”
Nakahara, H; Yamaguchi, J.*
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17. “Structure-Function Study of a Novel Inhibitor of Cyclin-Dependent Kinase C in Arabidopsis”
Saito, A. N.; Maeda, A. E.; Takahara, T. T.; Matsuo, H.; Nishina, M.; Ono, A.; Shiratake, K.; Notaguchi, M.; Yanai, T.; Kinoshita, T.; Ota, E.; Fujimoto, K. J.; Yamaguchi, J.*; Nakamichi, N.*
Plant Cell Physiol. **2022**, *63*, 1720–1728
18. “Synthesis and Properties of Pyridine-Fused Triazolylidene–Palladium: Catalyst for Cross-Coupling Using Chloroarenes and Nitroarenes”
Iizumi, K.; Nakayama, K. P.; Kato, K.; Muto, K.*; Yamaguchi, J.*
J. Org. Chem. **2022**, *87*, 11909–11918.
19. “Unified Synthesis of Multiply Arylated Alkanes by Catalytic Deoxygenative Transformation of Diarylketones”
Kurosawa, M. B.; Kato, K.; Muto, K.; Yamaguchi, J.*
Chem. Sci. **2022**, *13*, 10743–10751.
20. “Identification of α-Synuclein Proaggregator: Rapid Synthesis and Streamlining RT-QuIC Assays in Parkinson’s Disease”
Takada, F.; Kasahara, T.; Otake, K.; Maru, T.; Miwa, M.; Muto, K.; Sasaki, M.; Hirozane, Y.; Yoshikawa, M.*; and Yamaguchi, J.*
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21. “Chemical biology to dissect molecular mechanisms underlying plant circadian clocks”
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22. “Pd-Catalyzed 1,4-Carboamination of Bromoarenes with Diazo Compounds and Amines”
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23. “Palladium-Catalyzed Tandem Ester Dance/Decarbonylative Coupling Reactions”
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24. “Decarbonylative Reductive Coupling of Aromatic Esters by Nickel and Palladium Catalyst”
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26. "Ring-Opening Fluorination of Isoxazoles"
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27. "Formal Syntheses of Dictyodendrins B, C, and E by a Multi-substituted Indole Synthesis"
Kabuki, A; Yamaguchi, J.
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28. "Pd-Catalyzed Asymmetric Dearomatative Arylation of Indoles via a Desymmetrization Strategy"
Nie, Y.-H.; Komatsuda, M.; Yang, P.; Zheng, C.; Yamaguchi, J.; You, S.-L.*
Org. Lett. **2022**, *24*, 1481–1485.
29. "Phosphorylation of RNA Polymerase II by CDKC2 Maintains the Arabidopsis Circadian Clock Period"
Uehara, T. N.; Nonoyama, T.; Taki, K.; Kuwata, K.; Sato, A.; Fujimoto, K.J.; Hirota, T.; Matsuo, H.; Ono, A.; Takahara, T. T.; Tsutsui, H.; Suzuki, T.; Higashiyama, T.; Yanai, T.; Kay, S. A.; Itami, K.; Kinoshita, T.; Yamaguchi, J.*; Nakamichi, N.*
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30. "Ring-Opening Fluorination of Bicyclic Azaarenes"
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31. "Fluorination –A Decade of Progress (2010–2020)"
Suto, S.; Yamaguchi, J.*
J. Synth. Org. Chem. Jpn. **2021**, *79*, 910–967 (Review).
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34. "Development of Pd-Catalyzed Denitrative Couplings"
Asahara, K.; Kashihara, M.; Muto, K.; Nakao, Y.* Yamaguchi, J.*
J. Synth. Org. Chem. Jpn. **2021**, *79*, 11–21.
35. "Synthesis of Decaarylanthracene with Nine Different Substituents"
Asako, T.; Suzuki, S.; Tanaka, S.; Ota, E.; Yamaguchi, J.
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36. "Decarbonylative Synthesis of Aryl Nitriles from Aromatic Esters and Organocyanides by a Nickel Catalyst"
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40. “ σ -Bond Hydroboration of Cyclopropanes”
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41. “Synthesis of A Pentaarylcarbazole: Installation of Different Aryl Groups on Benzenoid Moiety”
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42. “Solvent Selection Scheme Using Machine Learning Based on Physicochemical Description of Solvent Molecules: Application to Cyclic Organometallic Reaction”
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43. “Catalytic Deoxygenative Coupling of Aromatic Esters with Organophosphorus Compounds”
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44. “Pd-Catalyzed C4-Dearomative Allylation of Benzyl Ammoniums with Allyltributylstannane”
Kayashima, Y.; Komatsuda, M.; Muto, K.; Yamaguchi, J.*
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45. “Dearomative Allylation of Naphthyl Cyanohydrins by Palladium Catalysis: Catalyst-Enhanced Site Selectivity”
Yanagumoto, A.; Komatsuda, M.; Muto, K.; Yamaguchi, J.*
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46. “Palladium-Catalyzed Mizoroki-Heck Reaction of Nitroarenes and Styrene Derivatives”
Okita, T.; Asahara, K. K.; Muto, K.; Yamaguchi, J.*
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47. “Ester Transfer Reaction of Aromatic Esters with Haloarenes and Arenols by a Nickel Catalyst”
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48. “Pd-Catalyzed Denitrative Intramolecular C-H Arylation”
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49. “Generation of Strong Casein Kinase 1 Inhibitor of *Arabidopsis Thaliana*”
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50. “Pd-Catalyzed Alkenyl Thioether Synthesis from Thioesters and N-Tosylhydrazones”
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53. "Casein Kinase 1 Family Regulates PRR5 and TOC1 in the Arabidopsis Circadian Clock"
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54. "Cell-based Screen Identifies a New Potent and Highly Selective CK2 Inhibitor for Modulation of Circadian Rhythms and Cancer Cell Growth"
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- 97.** " β -Selective C-H Arylation of Pyrroles: Leading to Concise Syntheses of Lamellarins C and I"
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- 99.** "Ni-Catalyzed α -Arylation of Ketones with Phenol Derivatives"
 Takise, R.; Muto, K.; Yamaguchi, J.*; Itami, K.*
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- 101.** "Manganese-Catalyzed Intermolecular C-H/C-H Coupling of Carbonyls and Heteroarenes"
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- 111.** “Decarbonylative C–H Biaryl Coupling”
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- 113.** “Improvement of σ1 receptor affinity by late-stage C–H bond arylation of spiro cyclic lactones”
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- 118.** “Pd- and Cu-catalyzed C–H Arylation of Indazoles”
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- 123.** “Synthesis of Dragmacidin D via Direct C–H Couplings”

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- 124.** “Exploitation of an Additional Hydrophobic Pocket of σ_1 Receptors: Late-stage Diverse Modifications of Spirocyclic Thiophenes by C–H Functionalization”

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Yamaguchi, A. D.; Mandal, D.; Yamaguchi, J.*; Itami, K.*

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- 129.** “Oxidative Biaryl Coupling of Thiophenes and Thiazoles with Arylboronic Acids through Palladium Catalysis: Otherwise Difficult C4-Selective C–H Arylation Enabled by Boronic Acids”

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Ueda, K.; Yanagisawa, S.; Yamaguchi, J.; Itami, K.*

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- 132.** “Syntheses of Fumagillin and Ovalicin”

Yamaguchi, J.; Hayashi, Y.*

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- 133.** “Asymmetric Total Synthesis of a Natural Product Using Catalytic Enantioselective Stereoablative Reactions”

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