

Publication List

Researcher ID: [D-4198-2009](#)

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Sum of the Times Cited: **8583** h-index: **46** (by Scopus)

Representative publications

1. "Transition-Metal-Catalyzed Denitrative Coupling of Nitroarenes"
Muto, K.; Okita, T.; Yamaguchi, J.*
ACS Catal. **2020**, *10*, 9856–9871. (Review)
2. "Catalytic Three-component C–C Bond Forming Dearomatization of Bromoarenes with Malonates and Diazo Compounds"
Kato, H.; Musha, I.; Komatsuda, M.; Muto, K.*; Yamaguchi, J.*
Chem. Sci. **2020**, *11*, 8779–8784.
3. "Ester Dance Reaction on the Aromatic Ring"
Matsushita, K.; Takise, R.; Muto, K.; [Yamaguchi, J.*](#)
Science Advances **2020**, *6*, eaba7614.
4. "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.
5. "Catalytic Deoxygenative Coupling of Aromatic Esters with Organophosphorus Compounds"
Kurosawa, M. B.; Isshiki, R.; Muto, K.; [Yamaguchi, J.*](#)
J. Am. Chem. Soc. **2020**, *142*, 7386–7392.
6. "Ester Transfer Reaction of Aromatic Esters with Haloarenes and Arenols by a Nickel Catalyst"
Isshiki, R.; Inayama, N.; Muto, K.; [Yamaguchi, J.*](#)
ACS Catal. **2020**, *10*, 3490–3494.
7. "Pd-Catalyzed Alkenyl Thioether Synthesis from Thioesters and N-Tosylhydrazones"
Ishitobi, K.; Muto, K.; [Yamaguchi, J.*](#)
ACS Catal. **2019**, *9*, 11685–11690.
8. "Pd-Catalyzed Dearomative Three-Component Reaction of Bromoarenes with Diazo Compounds and Allylborates"
Komatsuda, M.; Kato, H.; Muto, K.*; [Yamaguchi, J.*](#)
ACS Catal. **2019**, *9*, 8991–8995.
9. "Casein kinase 1 family regulates PRR5 and TOC1 in the Arabidopsis circadian clock"
Uehara, T. N.; Mizutani, Y.; Kuwata, K.; Hirota, T.; Sato, A.; Mizoi, J.; Takao, S.; Matsuo, H.; Suzuki, T.; Ito, S.; Saito, A. N.; Nishiwaki Ohkawa, T.; Yamaguchi-Shinozaki, K.; Yoshimura, T.; Kay, S. A.; Itami, K.; Kinoshita, T.; [Yamaguchi, J.*](#); Nakamichi, N.*
Proc Natl Acad Sci USA **2019**, *116*, 11528–11536.
10. "Synthesis of Octaaryl Naphthalenes and Anthracenes with Different Substituents"
Suzuki, S.; Itami, K.*; [Yamaguchi, J.*](#)
Angew. Chem., Int. Ed. **2017**, *56*, 15010–15013.
11. "Cross-coupling of Aromatic Esters and Amides"
Takise, R.; Muto, K.; [Yamaguchi, J.*](#)
Chem. Soc. Rev. **2017**, *46*, 5864–5888 (Review).
12. "Rh-catalyzed Regiodivergent Hydrosilylation of Acyl Aminocyclopropanes Controlled by Monophosphine Ligands"
Kondo, H.; Itami, K.; [Yamaguchi, J.*](#)
Chem. Sci. **2017**, *8*, 3799–3803.
13. "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.
14. “C–H Arylation and Alkenylation of Imidazoles by Nickel Catalysis: Solvent-accelerated Imidazole C–H Activation”
 Muto, K.; Hatakeyama, T.; [Yamaguchi, J.*](#); Itami, K.*
Chem. Sci. **2015**, *6*, 6792–6798.
 15. “Decarbonylative Organoboron Cross-coupling of Esters by Nickel Catalysis”
 Muto, K.; [Yamaguchi, J.*](#); Musaev, D. G.*; Itami, K.*
Nature Commun **2015**, *6*, 7508.
 16. 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.*
Angew. Chem., Int. Ed. **2015**, *54*, 7193–7197.
 17. “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.
 18. “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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 19. “Stereodivergent Synthesis of Arylcyclopropylamines by Sequential C–H Borylation and Suzuki–Miyaura Coupling”
 Miyamura, S.; Araki, M.; Suzuki, T.; [Yamaguchi, J.*](#); Itami, K.*
Angew. Chem., Int. Ed. **2015**, *54*, 846–851.
 20. “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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 Ueda, K.; Amaike, K.; Maceiczky, R. M.; Itami, K.*; [Yamaguchi, J.*](#)
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 22. “Ni-Catalyzed α -Arylation of Ketones with Phenol Derivatives”
 Takise, R.; Muto, K.; [Yamaguchi, J.*](#); Itami, K.*
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 23. “Aromatic C–H Coupling with Hindered Arylboronic Acids by Pd/Fe Dual Catalysts”
 Yamaguchi, K.; Kondo, H.; [Yamaguchi, J.*](#); Itami, K.*
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 24. “Isolation, Structure, and Reactivity of an Arylnickel(II) Pivalate Complex in Catalytic C–H/C–O Biaryl Coupling”
 Muto, K.; [Yamaguchi, J.*](#); Lei, A.*; Itami, K.*
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 25. “C–H Alkenylation of Azoles with Enols and Esters by Nickel Catalysis”
 Linghui, M.; Kamada, Y.; Muto, K.; [Yamaguchi, J.*](#); Itami, K.*
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 27. “C–H Bond Functionalization: Emerging Synthetic Tools for the Synthesis of Natural Products and Pharmaceuticals”
[Yamaguchi, J.*](#); Yamaguchi, A. D.; Itami, K.*
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 28. “Decarbonylative C–H Coupling of Azoles and Aryl Esters: Unprecedented Nickel Catalysis and Application to the Synthesis of Muscoride A”

Amaike, K.; Muto, K.; Yamaguchi, J.*; Itami, K.*

J. Am. Chem. Soc. **2012**, *134*, 13573–13576.

29. “Nickel-Catalyzed C–H/C–O Coupling of Azoles with Phenol Derivatives”

Muto, K.; Yamaguchi, J.; Itami, K.*

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30. “Synthesis of Dragmacidin D via Direct C–H Couplings”

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

J. Am. Chem. Soc. **2011**, *133*, 19660–19663.

Under revision, submitted and to be submitted

1. “TBA: Plant circadian rhythm”

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.

2020, under revision.

2. “TBA: Plant circadian rhythm”

Takahara, T. T.; Yamaguchi, J.*; Nakamichi, N. et al

2020, to be submitted.

3. “TBA: Essay”

Narayama, K.; Yamaguchi, J.*

2020, to be submitted.

4. “TBA: Denitrative coupling”

Muto, K.; Asahara, K.; Kashihara, M. Nakao, Y.;* Yamaguchi, J.*

2020, submitted.

5. “TBA: Function group Metathesis”

Isshiki, R.; Kurosawa, M. B.; Muto.; Yamaguchi, J.*

2020, to be submitted.

6. “TBA: Medicinal Chemistry”

Kasahara, T. Takada, F. Saito, B. Otake, K.; Yoshikawa, M.,; Muto, K. Yamaguchi, J.*

2020, to be submitted.

7. “TBA: Fluorination”

Suto, A.; Yamaguchi, J.*

2020, to be submitted.

8. “TBA: Fluorination”

Suto, A.; Yamaguchi, J.*

2020, to be submitted.

Full publications

Published on Preprint Server

1. "A unique small molecule pair controls the plant circadian clock"
Uehara, T. N.; Takao, S.; Matsuo, H.; Saito, A.N.; Ota, E.; Ono, A.; Itami, K.; Kinoshita, T.; [Yamaguchi, J.*](#);
Nakamichi, N.*
BioRxiv 2020, preprint DOI: [10.1101/2020.05.25.113746](https://doi.org/10.1101/2020.05.25.113746)

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2. "Synthesis of Decaarylthracene with Nine Different Substituents"
Asako, T.; Suzuki, S.; Tanaka, S.; Ota, E.; Yamaguchi, J.
J. Org. Chem. 2020, ASAP.
3. "Decarbonylative Synthesis of Aryl Nitriles from Aromatic Esters and Organocyanides by a Nickel Catalyst"
Iizumi, K.; Kurosawa, M. B.; Isshiki, R.; Muto, K.; Yamaguchi, J.
Synlett 2020, eFirst.
Published as part of the Cluster Nickel Catalysis (Invited contribution).
4. Transition-Metal-Catalyzed Denitrative Coupling of Nitroarenes
Muto, K.; Okita, T.; [Yamaguchi, J.*](#)
ACS Catal. 2020, 10, 9856–9871. (Review)
Most Read Article (Aug, 2020)
5. "Catalytic Three-component C–C Bond Forming Dearomatization of Bromoarenes with Malonates and Diazo Compounds"
Kato, H.; Musha, I.; Komatsuda, M.; Muto, K.*; [Yamaguchi, J.*](#)
Chem. Sci. 2020, 11, 8779–8784.
6. "Ester Dance Reaction on the Aromatic Ring"
Matsushita, K.; Takise, R.; Muto, K.; [Yamaguchi, J.*](#)
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Highlighted in C&EN, Chemical Daily, Azo Materials
7. "σ-Bond Hydroboration of Cyclopropanes"
Kondo H.; Miyamura, S.; Matsushita, K.; Kato, H.; Kobayashi, C.; Arifin; Itami, K.; Yokogawa, D.*; [Yamaguchi, J.*](#)
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Highlighted in newspaper(Chemicadaily) and news media (Chemistry Views)
Most Read Article (June, 2020)
Highlighted in newspaper (Chemicadaily) and news media (Chemistry Views)
8. "Synthesis of A Pentaarylcarbazole: Installation of Different Aryl Groups on Benzenoid Moiety"
Tannaka, K.; Asako, T.; Ota, E.; [Yamaguchi, J.*](#)
Chem Lett. 2020, 49, 918–920.
9. "Solvent Selection Scheme Using Machine Learning Based on Physicochemical Description of Solvent Molecules: Application to Cyclic Organometallic Reaction"
Fujinami, M.; Maekawara, H.; Isshiki, R.; Seino, J.; [Yamaguchi, J.](#); Nakai, H.*
Bull. Chem. Soc. Jpn 2020, 93, 841–845.
10. "Catalytic Deoxygenative Coupling of Aromatic Esters with Organophosphorus Compounds"
Kurosawa, M. B.; Isshiki, R.; Muto, K.; [Yamaguchi, J.*](#)
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Highlighted in newspaper(Chemicadaily)
11. "Pd-Catalyzed C4-Dearomative Allylation of Benzyl Ammoniums with Allyltributylstannane"
Kayashima, Y.; Komatsuda, M.; Muto, K.*; [Yamaguchi, J.*](#)
Chem Lett. 2020, 49, 836–839.
Selected as an Editor's Choice
Selected as an inside cover
12. "Dearomative Allylation of Naphthyl Cyanohydrins by Palladium Catalysis: Catalyst-Enhanced Site

Selectivity”

Yanagumoto, A.; Komatsuda, M.; Muto, K.;* [Yamaguchi, J.*](#)

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13. “Palladium-Catalyzed Mizoroki–Heck Reaction of Nitroarenes and Styrene Derivatives”

Okita, T.; Asahara, K. K.; Muto, K.; [Yamaguchi, J.*](#)

Org. Lett. **2020**, *22*, 3205–3208.

Most Read Article (May, 2020)

14. “Ester Transfer Reaction of Aromatic Esters with Haloarenes and Arenols by a Nickel Catalyst”

Isshiki, R.; Inayama, N.; Muto, K.; [Yamaguchi, J.*](#)

ACS Catal. **2020**, *10*, 3490–3494.

Most Read Article (March and April 2020)

Highlighted in NikkeiSangyo Shinbun, Chemical Daily

15. “Asymmetric Synthesis of 5,7–Fused Ring System Enabled by Intramolecular Buchner Reaction with Chiral Rhodium Catalyst”

Hoshi, T.; Ota, E.; Inokuma, Y.; [Yamaguchi, J.*](#)

Org. Lett. **2019**, *21*, 10081–10084.

16. “Pd-Catalyzed Alkenyl Thioether Synthesis from Thioesters and N-Tosylhydrazones”

Ishitobi, K.; Muto, K.; [Yamaguchi, J.*](#)

ACS Catal. **2019**, *9*, 11685–11690.

17. “Pd-Catalyzed Dearomative Three-Component Reaction of Bromoarenes with Diazo Compounds and Allylborates”

Komatsuda, M.; Kato, H.; Muto, K.;* [Yamaguchi, J.*](#)

ACS Catal. **2019**, *9*, 8991–8995.

Most Read Article (September 2019)

18. “Pd-Catalyzed Denitrative Intramolecular C–H Arylation”

Asahara, K. K.; Okita, T.; Saito, A. N. Muto, K.; Nakao, Y.; [Yamaguchi, J.*](#)

Org. Lett. **2019**, *21*, 4721–4724.

19. “Generation of Strong Casein Kinase 1 Inhibitor of Arabidopsis Thaliana”

Saito, A. N.; Matsuo, H.; Kuwata, K.; Ono, A.; Kinoshita, T.; [Yamaguchi, J.*](#); Nakamichi, N.*

Plant Direct **2019**, *3*, e00172.

20. “Casein Kinase 1 Family Regulates PRR5 and TOC1 in the Arabidopsis Circadian Clock”

Uehara, T. N.; Mizutani, Y.; Kuwata, K.; Hirota, T.; Sato, A.; Mizoi, J.; Takao, S.; Matsuo, H.; Suzuki, T.; Ito, S.; Saito, A. N.; Nishiwaki Ohkawa, T.; Yamaguchi-Shinozaki, K.; Yoshimura, T.; Kay, S. A.; Itami, K.; Kinoshita, T.; [Yamaguchi, J.*](#); Nakamichi, N.*

Proc Natl Acad Sci USA **2019**, *116*, 11528–11536.

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21. “Cell-based Screen Identifies a New Potent and Highly Selective CK2 Inhibitor for Modulation of Circadian Rhythms and Cancer Cell Growth”

Oshima, T.; Niwa, Y.; Kuwata, K.; Srivastava, A.; Hyoda, T.; Tsuchiya, Y.; Kumagai, M.; Tsuyuguchi, M.; Tamaru, T.; Sugiyama, A.; Ono, N.; Zolboot, N.; Aikawa, Y.; Oishi, S.; Nonami, A.; Arai, F.; Hagihara, S.; [Yamaguchi, J.](#); Tama, F.; Kunisaki, Y.; Yagita, K.; Ikeda, M.; Kinoshita, T.; Kay, S. A.; Itami, K.; Hirota, T.*

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22. “Studying Abroad Led to New Friendships and New Research Directions”

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23. “Pd-Catalyzed Dearomative Allylation of Benzyl Phosphates”

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24. “Synthesis of A Heptaarylisoquinoline: Unusual Disconnection for Constructing Isoquinoline Frameworks”

Asako, T.; Suzuki, S.; Itami, K.; Muto, K.; [Yamaguchi, J.*](#)

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Selected as an Editor’s Choice

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25. "Dibenzofuran Synthesis: Decarbonylative Intramolecular C-H Arylation of Aromatic Esters"
Okita, T.; Komatsuda, M.; Saito, A. N.; Hisada, T.; Takahara, T. T.; Nakayama, K. P.; Isshiki, R.; Takise, R.; Muto, K.; [Yamaguchi, J.*](#)
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[Invitation to Contribute to a Special Issue: C-H Activation](#)
26. "Decarbonylative Methylation of Aromatic Esters by a Nickel Catalyst"
Okita, T.; Muto, K.; [Yamaguchi, J.*](#)
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27. "Modular Synthesis of Heptaaryllindole"
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28. "Pd-Catalyzed Decarbonylative C-H Coupling of Azoles and Aromatic Esters"
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29. "Decarbonylative Coupling Reaction of Aromatic Esters"
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J. Synth. Org. Chem. Jpn. **2018**, *76*, 300-314. (Review).
30. "Decarbonylative Aryl Thioether Synthesis by Ni Catalysis"
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31. "Decarbonylative C-P Bond Formation using Aromatic Esters and Organophosphorus Compounds"
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Org. Lett. **2018**, *20*, 1150-1153.
32. "Design, Synthesis and Evaluation of γ -Turn Mimetics as LSD1-Selective Inhibitors"
Ota, Y.; Miyamura, S.; Araki, M.; Itoh, Y.; Yasuda, S.; Masada, M.; Taniguchi, T.; Sowa, Y.; Sakai, T.; Itami, K.; [Yamaguchi, J.*](#); Suzuki, T.*
Bioorg. Med. Chem. **2018**, *26*, 775-785.
33. "Synthesis of fully arylated (hetero)arenes by Coupling Reaction"
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J. Synth. Org. Chem. Jpn. **2018**, *76*, 98-110 (Review).
34. "Catalytic α -Arylation of Ketones with Heteroaromatic Esters"
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Synlett **2017**, *28*, 2599-2603.
[Published as part of the Cluster C-O Activation \(Invited contribution\).](#)
35. "Synthesis of Octaaryl Naphthalenes and Anthracenes with Different Substituents"
Suzuki, S.; Itami, K.*; [Yamaguchi, J.*](#)
Angew. Chem., Int. Ed. **2017**, *56*, 15010-15013.
36. "Cross-coupling of Aromatic Esters and Amides"
Takise, R.; Muto, K.; [Yamaguchi, J.*](#)
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37. "Thiazole-based Sigma-1 Receptor Ligands: Diversity by Late-stage C-H Arylation of Thiazoles, Structure Affinity and Selectivity Relationships and Molecular Interactions"
Kokornaczyk, A.; Schepmann, D.; [Yamaguchi, J.](#); Itami, K.; Laurini, E.; Fermeiglia, M.; Pricl, S.; Wünsch, B*
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38. "Theoretical Elucidation of Potential Enantioselectivity in a Pd-Catalyzed Aromatic C-H Coupling Reaction"
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39. "Synthesis of Multiply Arylated Pyridines"
Asako, T.; Hayashi, W.; Suzuki, S.; Amaike, K.; Itami, K.; Muto, K.; [Yamaguchi, J.*](#)
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Invitation to contribute for s Special Issue in Honor of Professor Ang Li

40. "Rh-Catalyzed Regiodivergent Hydrosilylation of Acyl Aminocyclopropanes Controlled by Monophosphine ligands"
Kondo, H.; Itami, K.; [Yamaguchi, J.*](#)
Chem. Sci. **2017**, *8*, 3799-3803.
41. "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.
Most Read Article (March, 2017)
Highlighted in Chemical Daily, Nikkei-sangyo Shinbun, Phys.org, c2W, Science Daily, Chem-Station
42. "Synthesis of Fully Arylated (Hetero)arenes"
Suzuki, S.; [Yamaguchi, J.*](#)
Chem. Commun. **2017**, *53*, 1568-1582. (Review)
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43. "Structure-Activity Relation of AMOR Sugar Molecule that Activates Pollen-Tubes for Ovular Guidance"
Jiao J.; Mizukami, A.G.; Sankaranarayanan, S.; [Yamaguchi, J.](#); Itami, K.; Higashiyama, T.*
Plant Physiol. **2017**, *173*, 354-363.
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44. "Toward an Ideal Synthesis of (Bio)molecules through Direct Arene Assembling Reactions"
[Yamaguchi, J.*](#); Itami, K.*
Bull. Chem. Soc. Jpn. **2017**, *90*, 367-383 (Accounts).
Invited contribution for Award accounts of The Chemical Society of Japan Award for Young Chemists for 2012
Selected As Back Cover Picture
Most Read Article (December 2016)
45. "Palladium-Catalyzed Decarbonylative Alkynylation of Aromatic Esters"
Okita, T.; Kumazawa, K.; Takise, R.; Muto, K.; Itami, K.*; [Yamaguchi, J.*](#)
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46. "Syntheses of Biologically Active 2-Arylcyclopropylamines"
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Synthesis **2017**, *49*, 1131-1149 (Review).
Highlighted as a Front Cover
47. "Palladium-Catalyzed Decarbonylative Cross-Coupling of Azinecarboxylates with Arylboronic Acids"
Muto, K.; Hatakeyama, T.; Itami, K.*; [Yamaguchi, J.*](#)
Org. Lett. **2016**, *18*, 5106-5109.
48. "C-H Activation Enables Rapid Structure-Activity Relationship Study of Arylcyclopropyl amines for Potent and Selective LSD1 Inhibitors"
Miyamura, S.; Araki, M.; Ota, Y.; Itoh, Y.; Yasuda, S.; Masada, M.; Taniguchi, T.; Sowa, Y.; Sakai, T.; Suzuki, T.*; Itami, K.*; and [Yamaguchi, J.*](#)
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49. "Cyanation of Phenol Derivatives with Aminoacetonitriles by Nickel Catalysis"
Takise, R.; Itami, K.*; [Yamaguchi, J.*](#)
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50. "Nickel-Catalyzed Aromatic C-H Functionalization"
[Yamaguchi, J.*](#); Muto, K.; Itami, K.
Top Curr. Chem. **2016**, *374*, 55 (Review)
Invited contribution
51. "The AMOR Arabinogalactan Sugar Chain Induces Pollen-Tube Competency to Respond to Ovular Guidance"
Mizukami, A. G.; Inatsugi, R.; Jiao, J.; Kotake, T.; Kuwata, K.; Ootani, K.; Okuda, S.; Sankaranarayanan, S.; Sato, Y.; Maruyama, D.; Iwai, H.; Garénaux, E.; Sato, C.; Kitajima, K.; Tsumuraya, Y.; Mori, H.; [Yamaguchi, J.](#)

- Itami, K.; Sasaki, N.; Higashiya, T.*
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 Kyodo Tsushin, goo News, Gunosy, Chem-Station
52. “Development and Elucidation of the Ni-Catalyzed Direct Coupling Reaction”
 Yamaguchi, J.*; Muto, K.; Itami, K.
Chemical Times **2016**, 1–7 (Review).
 Invited contribution
53. “Synthesis of Triarylpyridines in Thiopeptide Antibiotics by Using a C–H Arylation/Ring-Transformation Strategy”
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