

Publication List

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Sum of the Times Cited: **8142** h-index: **45** (by Scopus)

Representative publications

1. “ 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**, Just Accepted Manuscript
2. “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.
3. “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.
1. “Pd-Catalyzed Alkenyl Thioether Synthesis from Thioesters and N-Tosylhydrazones”
Ishitobi, K.; Muto, K.; [Yamaguchi, J.*](#)
ACS Catal. **2019**, *9*, 11685–11690.
2. “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.
3. “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.
4. “Synthesis of Octaaryl Naphthalenes and Anthracenes with Different Substituents”
Suzuki, S.; Itami, K.*; [Yamaguchi, J.*](#)
Angew. Chem., Int. Ed. **2017**, *56*, 15010–15013.
5. “Cross-coupling of Aromatic Esters and Amides”
Takise, R.; Muto, K.; [Yamaguchi, J.*](#)
Chem. Soc. Rev. **2017**, *46*, 5864–5888 (Review).
6. “Rh-catalyzed Regiodivergent Hydrosilylation of Acyl Aminocyclopropanes Controlled by Monophosphine Ligands”
Kondo, H.; Itami, K.; [Yamaguchi, J.*](#)
Chem. Sci. **2017**, *8*, 3799–3803.
7. “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.
8. “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.
9. “Decarbonylative Organoboron Cross-coupling of Esters by Nickel Catalysis”
Muto, K.; [Yamaguchi, J.*](#); Musaev, D. G.*; Itami, K.*
Nature Commun **2015**, *6*, 7508.
10. 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.

11. “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.
12. “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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13. “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.
14. “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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15. “ β -Selective C–H Arylation of Pyrroles: Leading to Concise Syntheses of Lamellarins C and I”
Ueda, K.; Amaike, K.; Maceiczky, R. M.; Itami, K.*; [Yamaguchi, J.](#)*
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16. “Ni-Catalyzed α -Arylation of Ketones with Phenol Derivatives”
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17. “Aromatic C–H Coupling with Hindered Arylboronic Acids by Pd/Fe Dual Catalysts”
Yamaguchi, K.; Kondo, H.; [Yamaguchi, J.](#)*; Itami, K.*
Chem. Sci. **2013**, *4*, 3753–3757.
18. “Isolation, Structure, and Reactivity of an Arylnickel(II) Pivalate Complex in Catalytic C–H/C–O Biaryl Coupling”
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19. “C–H Alkenylation of Azoles with Enols and Esters by Nickel Catalysis”
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20. “Aromatic C–H Coupling with Hindered Arylboronic Acids by Pd/Fe Dual Catalysts”
Yamaguchi, K.; Kondo, H.; [Yamaguchi, J.](#)*; Itami, K.*
Chem. Sci. **2013**, *4*, 3753–3757.
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[Yamaguchi, J.](#)*; Yamaguchi, A. D.; Itami, K.*
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22. “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.*
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23. “Nickel-Catalyzed C–H/C–O Coupling of Azoles with Phenol Derivatives”
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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, to be submitted.
5. "TBA: Function group Metathesis"
Isshiki, R.; Kurosawa, M. B.; Muto.; Yamaguchi, J.*
2020, to be submitted.
6. "TBA: Decarbonylative Coupling"
Iizumi, K.; Kurosawa, M. B.; Isshiki, R.; Muto.; Yamaguchi, J.*
2020, to be submitted.
7. "TBA: Medicinal Chemistry"
Kasahara, T. Takada, F. Saito, B. Otake, K.; Yoshikawa, M.,; Muto, K. Yamaguchi, J.*
2020, to be submitted.
8. "TBA: Denitrative coupling"
Muto, K.; Okita, T. ; Yamaguchi, J.*
2020, to be submitted.
9. "TBA: Fluorination"
Suto, A.; Yamaguchi, J.*
2020, to be submitted.
10. "TBA: Fluorination"
Suto, A.; Yamaguchi, J.*
2020, to be submitted.

Full publications

Published on Preprint Server

1. "Synthesis of Decaarylthracene with Nine Different Substituents"
Asako, T.; Suzuki, S.; Tanaka, S.; Ota, E.; Yamaguchi, J.
ChemRxiv 2020, preprint DOI: [chemrxiv.12410093](https://doi.org/10.26434/chemrxiv.12410093)
2. "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)
3. "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.*
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4. "Ester Dance Reaction on the Aromatic Ring"
Matsushita, K.; Takise, R.; Muto, K.; [Yamaguchi, J.*](#)
ChemRxiv 2019, Preprint DOI: [10.26434/chemrxiv.11472264.v1](https://doi.org/10.26434/chemrxiv.11472264.v1)

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5. " 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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6. "Synthesis of A Pentaarylcarbazole: Installation of Different Aryl Groups on Benzenoid Moiety"
Tannaka, K.; Asako, T.; Ota, E.; [Yamaguchi, J.*](#)
Chem Lett. 2020, Advanced Publication.
7. "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, Advanced Publication.
8. "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.
9. "Pd-Catalyzed C4-Dearomative Allylation of Benzyl Ammoniums with Allyltributylstannane"
Kayashima, Y.; Komatsuda, M.; Muto, K.*; [Yamaguchi, J.*](#)
Chem Lett. 2020, Advanced Publication
Selected as an Editor's Choice
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10. "Dearomative Allylation of Naphthyl Cyanohydrins by Palladium Catalysis: Catalyst-Enhanced Site Selectivity"
Yanagumoto, A.; Komatsuda, M.; Muto, K.*; [Yamaguchi, J.*](#)
Org. Lett. 2020, 22, 3423–3427.
11. "Palladium-Catalyzed Mizoroki–Heck Reaction of Nitroarenes and Styrene Derivatives"
Okita, T.; Asahara, K. K.; Muto, K.; [Yamaguchi, J.*](#)
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12. "Ester Transfer Reaction of Aromatic Esters with Haloarenes and Arenols by a Nickel Catalyst"
Isshiki, R.; Inayama, N.; Muto, K.; [Yamaguchi, J.*](#)
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13. "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.*](#)
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14. “Pd-Catalyzed Alkenyl Thioether Synthesis from Thioesters and N-Tosylhydrazones”
 Ishitobi, K.; Muto, K.; [Yamaguchi, J.*](#)
ACS Catal. **2019**, *9*, 11685–11690.
15. “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 \(September 2019\)](#)
16. “Pd-Catalyzed Denitrative Intramolecular C-H Arylation”
 Asahara, K. K.; Okita, T.; Saito, A. N. Muto, K.; Nakao, Y.; [Yamaguchi, J.*](#)
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17. “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.*
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18. “Casein Kinase 1 Family Regulates PRR5 and TOC1 in the Arabidopsis Circadian Clock”
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 Saito, A. N.; Nishiwaki Ohkawa, T.; Yamaguchi-Shinozaki, K.; Yoshimura, T.; Kay, S. A.; Itami, K.; Kinoshita, T.;
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19. “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.*
Science Advances **2019**, *5*, eaau9060.
20. “Studying Abroad Led to New Friendships and New Research Directions”
[Yamaguchi, J.*](#)
Yakugaku zasshi **2019**, *139*, 229–233.
21. “Pd-Catalyzed Dearomative Allylation of Benzyl Phosphates”
 Komatsuda, M. Muto, K.*; [Yamaguchi, J.*](#)
Org. Lett. **2018**, *20*, 4354–4357.
22. “Synthesis of A Heptaaryloquinoline: Unusual Disconnection for Constructing Isoquinoline Frameworks”
 Asako, T.; Suzuki, S.; Itami, K.; Muto, K.; [Yamaguchi, J.*](#)
Chem. Lett. **2018**, *47*, 968–970.
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23. “Dibenzofuran Synthesis: Decarbonylative Intramolecular C-H Arylation of Aromatic Esters”
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[Invitation to Contribute to a Special Issue: C-H Activation](#)
24. “Decarbonylative Methylation of Aromatic Esters by a Nickel Catalyst”
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25. “Modular Synthesis of Heptaaryloindole”
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26. “Pd-Catalyzed Decarbonylative C-H Coupling of Azoles and Aromatic Esters”
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27. “Decarbonylative Coupling Reaction of Aromatic Esters”
Isshiki, R.; Okita, T; Muto, K.; [Yamaguchi, J.*](#)
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28. “Decarbonylative Aryl Thioether Synthesis by Ni Catalysis”
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29. “Decarbonylative C–P Bond Formation using Aromatic Esters and Organophosphorus Compounds”
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30. “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.
31. “Synthesis of fully arylated (hetero)arenes by Coupling Reaction”
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32. “Catalytic α -Arylation of Ketones with Heteroaromatic Esters”
Isshiki, R.; Takise, R.; Itami, K.; Muto, K.; [Yamaguchi, J.*](#)
Synlett **2017**, *28*, 2599–2603.
Published as part of the [Cluster C–O Activation \(Invited contribution\)](#).
33. “Synthesis of Octaaryl Naphthalenes and Anthracenes with Different Substituents”
Suzuki, S.; Itami, K.*; [Yamaguchi, J.*](#)
Angew. Chem., Int. Ed. **2017**, *56*, 15010-15013.
34. “Cross-coupling of Aromatic Esters and Amides”
Takise, R.; Muto, K.; [Yamaguchi, J.*](#)
Chem. Soc. Rev. **2017**, *46*, 5864-5888 (Review).
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35. “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.; Fermeglia, M.; Prich, S.; Wünsch, B*
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36. “Theoretical Elucidation of Potential Enantioselectivity in a Pd-Catalyzed Aromatic C-H Coupling Reaction”
Nishimoto, Y.; Kondo, H.; Yamaguchi, K.; Yokogawa, D.; [Yamaguchi, J.](#); Itami, K.; Irle, S*
J. Org. Chem. **2017**, *82*, 4900–4906.
37. “Synthesis of Multiply Arylated Pyridines”
Asako, T.; Hayashi, W.; Suzuki, S.; Amaike, K.; Itami, K.; Muto, K.; [Yamaguchi, J.*](#)
Tetrahedron **2017**, *73*, 3669-3676
Invitation to contribute for a [Special Issue in Honor of Professor Ang Li](#)
38. “Rh-Catalyzed Regiodivergent Hydrosilylation of Acyl Aminocyclopropanes Controlled by Monophosphine ligands”
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Chem. Sci. **2017**, *8*, 3799-3803.
39. “Decarbonylative Diaryl Ether Synthesis by Pd and Ni Catalysis”
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J. Am. Chem. Soc. **2017**, *139*, 3340–3343.
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40. “Synthesis of Fully Arylated (Hetero)arenes”
Suzuki, S.; [Yamaguchi, J.*](#)
Chem. Commun. **2017**, *53*, 1568–1582. (Review)
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41. "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.
Invited as a Focus issue
42. "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)
43. "Palladium-Catalyzed Decarbonylative Alkynylation of Aromatic Esters"
Okita, T.; Kumazawa, K.; Takise, R.; Muto, K.; Itami, K.*; [Yamaguchi, J.](#)*
Chem Lett. **2017**, *46*, 218–220.
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44. "Syntheses of Biologically Active 2-Arylcyclopropylamines"
Miyamura, S.; Itami, K.; [Yamaguchi, J.](#)*
Synthesis **2017**, *49*, 1131–1149 (Review).
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45. "Palladium-Catalyzed Decarbonylative Cross-Coupling of Azinecarboxylates with Arylboronic Acids"
Muto, K.; Hatakeyama, T.; Itami, K.*; [Yamaguchi, J.](#)*
Org. Lett. **2016**, *18*, 5106–5109.
46. "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.](#)*
Org. Biomol. Chem. **2016**, *14*, 8576–8585.
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47. "Cyanation of Phenol Derivatives with Aminoacetonitriles by Nickel Catalysis"
Takise, R.; Itami, K.*; [Yamaguchi, J.](#)*
Org. Lett. **2016**, *18*, 4428–4431.
48. "Nickel-Catalyzed Aromatic C–H Functionalization"
[Yamaguchi, J.](#)*; Muto, K.; Itami, K.
Top Curr. Chem. **2016**, *374*, 55 (Review)
Invited contribution
49. "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.*
Current Biology **2016**, *26*, 1091–1097.
Highlighted in Chunichi Shimbun, Asahi Shinbun, Nikkei Shinbun, Saga Shinbun, EurekAlert!, Kyodo Tsushin, goo News, Gunosy, Chem-Station
50. "Development and Elucidation of the Ni-Catalyzed Direct Coupling Reaction"
[Yamaguchi, J.](#)*; Muto, K.; Itami, K.
Chemical Times **2016**, 1–7 (Review).
Invited contribution
51. "Synthesis of Triarylpyridines in Thiopeptide Antibiotics by Using a C–H Arylation/Ring-Transformation Strategy"
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Chem. Eur. J. **2016**, *22*, 4384–4388.
52. "Microwave-assisted regioselective direct C–H arylation of thiazole derivatives leading to increased σ_1 receptor affinity"

- Kokornaczyk, A.; Schepmann, D.; [Yamaguchi, J.](#); Itami, K.; Wünsch, B.*
Med. Chem. Commun. **2016**, *7*, 327–331.
53. “C–H Arylation and Alkenylation of Imidazoles by Nickel Catalysis: Solvent-accelerated Imidazole C–H Activation”
Muto, K.; Hatakeyama, T.; [Yamaguchi, J.](#)*; Itami, K.*
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54. “Decarbonylative Organoboron Cross-coupling of Esters by Nickel Catalysis”
Muto, K.; [Yamaguchi, J.](#)*; Musaev, D. G.*; Itami, K.*
Nature Commun **2015**, *6*, 7508.
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