

A. 査読付き原著論文

- 1) “Facile synthesis of trifluoromethyl-substituted enynes: Remarkable reactivity and stereoselectivity of tributyl(3,3,3-trifluoropropynyl)stannane in carbostannylation of alkynes”
S. Shimizu,* G. Jiang, M. Murai, Y. Takeda, Y. Nakao, T. Hiyama, E. Shirakawa, *Chemistry Letters*, 34, 1700–1701 (2005).
- 2) “Copper-catalyzed transformation of carbonyl-ene-nitrile compounds: Vinylation, imino ene reaction, and alkynylation of 2-aza-2,4-cyclopentadienone intermediates generated *via* Ritter-type hydration and dehydrative cyclization reactions”
M. Murai, S. Kawai, K. Miki, K. Ohe,* *Journal of Organometallic Chemistry*, 692, 579–584 (2007).
- 3) “Novel generation of 3,3,3-trifluoropropynyllithium and transformation of the carbonyl adducts to trifluoromethyl-substituted allenes”
M. Shimizu,* M. Higashi, Y. Takeda, G. Jiang, M. Murai, T. Hiyama, *Synlett*, 1163–1165 (2007).
- 4) “Transition metal-catalyzed ring-opening, substitution, and cyclopropanation reactions *via* vinylcarbene complexes generated from *O*-propargyl thiocarbamates”
Y. Ikeda, M. Murai, T. Abo, K. Miki, K. Ohe,* *Tetrahedron Letters*, 48, 6651–6654 (2007).
- 5) “Copper-catalyzed addition reactions of aromatics and ketones to 2-aza-2,4-cyclopentadienone: Facile and efficient transformation of carbonyl-ene-nitriles to 1*H*-pyrrolin-2(5*H*)-ones”
M. Murai, K. Miki, K. Ohe,* *The Journal of Organic Chemistry*, 73, 9174–9176 (2008).
- 6) “A new route to 3-acyl-2-aminobenzofurans: Palladium-catalyzed cycloisomerisation of 2-(cyanomethyl)-phenyl esters”
M. Murai, K. Miki, K. Ohe,* *Chemical Communications*, 45, 3466–3468, (2009).
- 7) “New preparation and synthetic reactions of 3,3,3-trifluoropropynyllithium, -borate and -stannane: Facile synthesis of trifluoromethylated allenes, arylacetylenes and enynes”
M. Shimizu,* M. Higashi, Y. Takeda, M. Murai, G. Jiang, Y. Asai, Y. Nakao, E. Shirakawa, T. Hiyama, *Future Medicinal Chemistry*, 1, 921–945 (2009).
- 8) “Atom-efficient synthesis of α -alkylidene-*N*-furylimines *via* catalytic vinylcarbene-transfer reactions to carbonyl-ene-nitrile compounds”
M. Murai, S. Yoshida, K. Miki, K. Ohe,* *Chemical Communications*, 46, 3366–3368 (2010).
- 9) “A stereoselective cyclization cascade mediated by $\text{SmI}_2\text{-H}_2\text{O}$: Synthetic studies towards Stolonidiol”
T. M. Baker, L. A. Sloan, L. H. Choudhury, M. Murai, D. J. Procter,* *Tetrahedron: Asymmetry*, 21, 1246–1261 (2010).
- 10) “Gallium(III)-catalyzed bromocyanation of alkynes: Regio- and stereoselective synthesis of β -bromo- α,β -unsaturated nitriles”
M. Murai, R. Hatano, S. Kitabata, K. Ohe,* *Chemical Communications*, 47, 2375–2377 (2011).
- 11) “Rhodium-catalyzed carbene transfer reactions *via* thienylcarbene complexes generated from thiocarbamoyl-ene-yne compounds”
A. Tsuneishi, K. Okamoto, Y. Ikeda, M. Murai, K. Miki, K. Ohe,* *Synlett*, 655–658 (2011).
- 12) “Practical synthesis of aromatic nitriles *via* gallium-catalyzed electrophilic cyanation of aromatic C–H bond”
K. Okamoto, M. Watanabe, M. Murai, R. Hatano, K. Ohe,* *Chemical Communications*, 48, 3127–3129 (2012).
- 13) “Pd- and Cu-catalyzed one-pot multicomponent synthesis of hetero α,α' -dimers of heterocycles”
T. Murata, M. Murai, Y. Ikeda, K. Miki, K. Ohe,* *Organic Letters*, 14, 2296–2299 (2012).
- 14) “Azulene-based conjugated polymers: Unique seven-membered ring connectivity leading to

- stimuli-responsiveness”
M. Murai, E. Amir, R. J. Amir, C. J. Hawker,* *Chemical Science*, 3, 2721–2725 (2012).
- 15) “Gold-catalyzed cycloisomerization reactions of 2-(2-propynyl)pyridine *N*-oxides leading to indolizinones”
M. Murai, S. Kitabata, K. Okamoto, K. Ohe,* *Chemical Communications*, 48, 7622–7624 (2012).
- 16) “Zinc-porphyrins functionalized with redox-active peripherals: Enhancement of $d\pi$ - $p\pi$ interaction leading to unique assembly and redox-triggered remote switching of fluorescence”
M. Murai, M. Sugimoto, M. Akita,* *Dalton Transactions*, 42, 16108–16120 (2013).
- 17) “Copper-catalyzed C–H cyanation of terminal alkynes with cyanogen iodide”
K. Okamoto,* M. Watanabe, N. Sakata, M. Murai, K. Ohe,* *Organic Letters*, 15, 5810–5813 (2013).
- 18) “Bismuth(III)-catalyzed dehydrative etherification and thioetherification of phenolic hydroxy groups”
M. Murai,* K. Origuchi, K. Takai,* *Organic Letters*, 16, 3828–3831 (2014).
- 19) “Modulating structure and properties in organic chromophores: Influence of azulene as a building block”
M. Murai, S.-Y. Ku, N. D. Treat, M. J. Robb, M. L. Chabinyk, C. J. Hawker,* *Chemical Science*, 5, 3753–3760 (2014).
- 20) “Bismuth-catalyzed synthesis of PAHs with a phenanthrene backbone *via* cyclization and aromatization of 2-(2-arylphenyl)vinyl ethers”
M. Murai,* N. Hosokawa, D. Roy, K. Takai,* *Organic Letters*, 16, 4134–4137 (2014).
- 21) “Conjugated oligomers incorporating azulene building blocks –Seven- vs five-membered ring connectivity”
E. Amir, M. Murai, R. J. Amir, R. J. S. Cowart Jr, M. L. Chabinyk, C. J. Hawker,* *Chemical Science*, 5, 4483–4489 (2014).
- 22) “Modulating the properties of azulene-containing polymers through controlled incorporation of regioisomers”
K. Tsurui, M. Murai, S.-Y. Ku, C. J. Hawker,* M. J. Robb,* *Advanced Functional Materials*, 24, 7338–7347 (2014).
- 23) “Rhenium-catalyzed synthesis of 2*H*-1,2-oxaphosphorin 2-oxides *via* the regio- and stereoselective addition reaction of β -keto phosphonates with alkynes”
M. Murai,* M. Nakamura, K. Takai,* *Organic Letters*, 16, 5784–5787 (2014).
- 24) “Rhodium-catalyzed dehydrogenative germylation of C–H bonds: New entry to unsymmetrically functionalized 9-germafluorenes”
M. Murai,* K. Matsumoto, R. Okada, K. Takai,* *Organic Letters*, 16, 6492–6495 (2014).
- 25) “Iridium-catalyzed intermolecular dehydrogenative silylation of polycyclic aromatic compounds without directing group”
M. Murai,* K. Takami, K. Takai,* *Chemistry –A European Journal*, 21, 4566–4570 (2015).
- 26) “Isolation and structural characterization of *gem*-di(iodozincio)methane complexes stabilized with nitrogen ligands”
Y. Nishida, N. Hosokawa, M. Murai,* K. Takai,* *Journal of the American Chemical Society*, 137, 114–117 (2015).
- 27) “Rhenium-catalyzed *anti*-Markovnikov addition reaction of methanetricarboxylates to unactivated terminal acetylenes”
S. Hori, M. Murai,* K. Takai,* *Journal of the American Chemical Society*, 137, 1452–1457 (2015).
- 28) “Transition metal-catalyzed facile access to 3,11-dialkylfulminenes for transistor application”
M. Murai,* H. Maekawa, S. Hamao, Y. Kubozono, D. Roy, K. Takai,* *Organic Letters*, 17, 708–711 (2015).

- 29) "Rhenium-catalysed dehydrogenative borylation of primary and secondary C(sp³)-H bonds adjacent to a nitrogen atom"
M. Murai,* T. Omura, Y. Kubozono, K. Takai,* *Chemical Communications*, 51, 4583–4586 (2015).
- 30) "Palladium-catalyzed three-component coupling reactions of 2-(cyanomethyl)phenol, aryl halides, and carbon monoxide"
M. Murai, K. Okamoto, K. Miki, K. Ohe,* *Tetrahedron*, 71, 4432–4437 (2015).
- 31) "Iridium-catalyzed dehydrogenative silylation of azulenes based on the regioselective C-H bonds activation"
M. Murai,* K. Takami, H. Takeshima, K. Takai,* *Organic Letters*, 17, 1798–1801 (2015).
- 32) "Acceleration effects of phosphine ligands on the rhodium-catalyzed dehydrogenative silylation and germylation of unactivated C(sp³)-H bonds"
M. Murai,* H. Takeshima, H. Morita, Y. Kuninobu, K. Takai,* *The Journal of Organic Chemistry*, 80, 5407–5414 (2015). Selected as a *Featured Article* and *ACS Editor's Choice*.
- 33) "Rhodium-catalyzed synthesis of benzosilolometallocenes via the dehydrogenative silylation of C(sp²)-H bonds"
M. Murai,* K. Matsumoto, K. Takeuchi, K. Takai,* *Organic Letters*, 17, 3102–3105 (2015).
- 34) "Stereospecific deoxygenation of aliphatic epoxides to alkenes under rhenium catalysis"
T. Nakagiri, M. Murai,* K. Takai,* *Organic Letters*, 17, 3346–3349 (2015).
Highlight in "*Organic Chemistry Highlights*".
- 35) "Short synthesis of [5]- and [7]phenacenes with silyl groups at the axis positions"
D. Roy, H. Maekawa, M. Murai,* K. Takai,* *Chemistry –An Asian Journal*, 10, 2518–2524 (2015).
- 36) "Rhodium-catalyzed synthesis of chiral spiro-9-silabifluorenes via dehydrogenative silylation: Mechanistic insights into the construction of tetraorganosilicon stereocenters"
M. Murai,* Y. Takeuchi, K. Yamauchi, Y. Kuninobu, K. Takai,* *Chemistry –A European Journal*, 22, 6048–6058 (2016). Selected as a *Hot Paper*.
- 37) "Palladium-catalyzed direct arylation of azulene based on the regioselective C-H bond activation"
M. Murai,* M. Yanagawa, M. Nakamura, K. Takai,* *Asian Journal of Organic Chemistry*, 629–635 (2016).
- 38) "Synthesis and properties of sila[n]helicenes via dehydrogenative silylation of C-H bonds under rhodium catalysis"
M. Murai,* R. Okada, A. Nishiyama, K. Takai,* *Organic Letters*, 18, 4380–4383 (2016).
- 39) "Molybdenum-catalyzed stereospecific deoxygenation of epoxides to alkenes"
S. Asako,* T. Sakae, M. Murai, K. Takai,* *Advanced Synthesis and Catalysis*, 358, 3966–3970 (2016).
Selected as a *Very Important Paper*.
- 40) "Rhenium-Catalyzed Construction of Polycyclic Hydrocarbon Frameworks by a Unique Cyclization of 1,*n*-Diyne Initiated by 1,1-Difunctionalization with Carbon Nucleophiles"
M. Murai,* E. Uemura, S. Hori, K. Takai,* *Angewandte Chemie International Edition*, 56, 5956–5960 (2017).
- 41) "Iridium-catalyzed dehydrogenative dimerization of benzylmethylsilanes via silylation of C(sp³)-H bonds adjacent to a silicon atom"
M. Murai,* Y. Takeuchi, K. Takai,* *Chemistry Letters*, 46, 1044–1047 (2017).
- 42) "Rhodium-catalyzed silylative and germylative cyclization with dehydrogenation leading to 9-sila- and 9-germafluorenes: A combined experimental and computational mechanistic study"
M. Murai,* R. Okada, S. Asako, K. Takai,* *Chemistry –A European Journal*, 23, 10861–10870 (2017).

Selected as a *Hot Paper*.

- 43) "Iridium-catalyzed hydrosilylation of cyclopropanes *via* regioselective carbon–carbon bond cleavage"
M. Murai,* A. Nishiyama, N. Nishinaka, H. Morita, K. Takai,* *Chemical Communications*, 53, 9281–9284 (2017).
- 44) "Structural characterization and unique catalytic performance of reactive silyl-substituted geminal dichromiomethane complexes stabilized with diamine ligand"
M. Murai,* R. Taniguchi, N. Hosokawa, Y. Nishida, H. Mimachi, T. Oshiki, K. Takai,* *Journal of the American Chemical Society*, 139, 13184–13192 (2017).
Selected as *JACS Spotlights* (*J. Am. Chem. Soc.*, 139, 12863–12864 (2017)).
- 45) "Azulene-fused linear-shaped polycyclic aromatic hydrocarbons with low bandgap and unique stimuli-responsiveness"
M. Murai,* S. Iba, H. Ota, K. Takai,* *Organic Letters*, 19, 5585–5588 (2017).
- 46) "Rhenium-catalyzed *ortho*-alkylation of phenols"
Y. Kuninobu,* M. Yamamoto, M. Nishi, T. Yamamoto, T. Matsuki, M. Murai,* K. Takai,* *Organic Syntheses*, 94, 280–291 (2017).
- 47) "Straightforward approach to borylcyclopropanes by chromium-promoted cyclopropanation of unactivated alkenes"
M. Murai,* C. Mizuta, R. Taniguchi, K. Takai,* *Organic Letters*, 19, 6104–6107 (2017).
- 48) "Iridium-catalyzed sequential silylation and borylation of heteroarenes based on the regioselective C–H bond activation"
M. Murai,* N. Nishinaka, K. Takai,* *Angewandte Chemie International Edition*, 57, 5843–5847 (2018).
- 49) "Amine-promoted *anti*-Markovnikov addition reaction of 1,3-dicarbonyl compounds with terminal alkynes under rhenium catalysis"
M. Murai,* E. Uemura, K. Takai,* *ACS Catalysis*, 8, 5454–5459 (2018).
- 50) "Catalytic cleavage and reformation of ethereal σ -bonds"
M. Murai,* K. Origuchi, K. Takai,* *Chemistry Letters*, 47, 927–930 (2018).
- 51) "Unsymmetrical difunctionalization of two different C–H bonds in one-pot under transition metal catalysis"
M. Murai,* K. Takai,* *Synthesis* (Mini review), 51, 40–54 (2019).
Invited contribution to the "*Golden Synthesis Anniversary Special Issue*" (P. Knochel, Ed.).
- 52) "Regioselective arene homologation through rhenium-catalyzed deoxygenative aromatization of 7-oxabicyclo[2.2.1]hepta-2,5-diene"
M. Murai,* T. Ogita, K. Takai,* *Chemical Communications*, 55, 2332–2335 (2019).
- 53) "Palladium-catalyzed double-bond migration of unsaturated hydrocarbons controllable by second metal catalysts"
M. Murai,* K. Nishimura, K. Takai,* *Chemical Communications*, 55, 2769–2772 (2019).
- 54) "Chromium-mediated stannylcyclopropanation of alkenes with (diiodomethyl)stannanes"
M. Murai,* R. Taniguchi, C. Mizuta, K. Takai,* *Organic Letters*, 21, 2668–2672 (2019).
- 55) "Regioselective functionalization of 9,9-dimethyl-9-silafluorenes by borylation, bromination, and nitration"
M. Murai,* N. Nishinaka, M. Kimura, K. Takai,* *The Journal of Organic Chemistry*, 84, 5667–5676 (2019).
- 56) "Rhenium-catalyzed regioselective *ortho*-alkenylation and [3+2+1]cycloaddition of phenols with internal alkynes"
M. Murai,* M. Yamamoto, K. Takai,* *Organic Letters*, 21, 3441–3445 (2019).

- 57) “Rhenium-catalysed cyclization *via* 1,2-iodine and 1,5-hydrogen migration for the synthesis of 2-iodo-1*H*-indenes”
M. Murai,* K. Takai,* *Organic Letters*, 21, 6756–6760 (2019).
- 58) “Mechanistic insights into rhenium-catalyzed regioselective *C*-alkenylation of phenols with internal alkynes”
M. Murai,* M. Yamamoto, K. Takai,* *Chemistry –A European Journal*, 25, 15189–15197 (2019).
- 59) “Regioselective sequential silylation and borylation of aromatic aldimines as a strategy for programming synthesis of multifunctionalized benzene derivatives”
M. Murai,* N. Nishinaka, T. Enoki, K. Takai,* *Organic Letters*, 22, 316–321 (2020).
- 60) “Cyclization of 1,*n*-enynes initiated by the addition reaction of *gem*-dichromiomethane reagents to alkynes”
M. Murai,* R. Taniguchi, K. Takai,* *Organic Letters*, 22, 3985–3988 (2020).
- 61) “Cyclization of 5-alkynones with chromium alkyldiene equivalents generated *in situ* from *gem*-dichromiomethanes”
M. Murai,* R. Taniguchi, T. Kurogi, S. Moritani, K. Takai,* *Chemical Communications*, 56, 9711–9714 (2020).
- 62) “Regiodivergent carbene/alkyne metathesis in chromium-mediated coupling and cyclization with 1,6-enynes”
M. Murai,* R. Taniguchi, K. Takai,* *Bulletin of the Chemical Society of Japan*, 94, 2848–2852 (2021).
- 63) “Silylative cyclization with dehydrogenation leading to benzosilole-fused azulenes showing unique stimuli-responsive fluorescence”
M. Murai,* *Asian Journal of Organic Chemistry*, 11, 262–266 (2022).
- 64) “Diazulenylmethyl cations with a silicon bridge: A π -extended cationic motif to form *J*-aggregates with near-infrared absorption and emission”
M. Murai,* M. Abe, S. Ogi, S. Yamaguchi,* *Journal of the American Chemical Society*, 144, 20385–20393 (2022).
Press released by Nagoya Univ.
- 65) “Germanium- and tin-bridged diazulenylmethyl cations: Effects of the group 14 element on the structure and properties of the π -extended cation”
M. Murai,* M. Ito, S. Takahashi, S. Yamaguchi,* *Dalton Transactions*, 52, *in press* (2023).
- 66) “A kinetically stabilized nitrogen-doped triangulene cation: Stable and NIR fluorescent diradical cation with triplet ground state”
S. Arikawa, A. Shimizu,* D. Shiomi, K. Sato,* T. Takui, H. Sotome,* H. Miyasaka, M. Murai, S. Yamaguchi, S. Shintani,* *Angewandte Chemie International Edition*, 62, e202302714 (2023).
- 67) “Azulene-fused linearly π -extended polycyclic aromatic hydrocarbons: Synthesis, photophysical properties, and OFETs applications”
M. Murai,* S. Iba, S. Hamao, Y. Kubozono, H. Ota, K. Takai,* *Bulletin of the Chemical Society of Japan*, 96, 1077 (2023).
Invited contribution to the “*Controlled Chemical Construction (C3) for Advanced Functions*” (Sawamoto, M. Ed.), and highlighted as a “*Selected Paper*”.
- 68) “Dithienoazepine-based near-infrared dyes: Janus-faced effects of thiophene-fused structure on antiaromatic azepines”
M. Murai,* T. Enoki, S. Yamaguchi,* *Angewandte Chemie International Edition*, 62, e202311445 (2023).
Selected as a *Very Important Paper* and *Inside Cover*.
Highlighted in *Angew. Chem. Int. Ed.* **2024**, 63, e202317060 and *ChemStation*.
Press released by Nagoya Univ.
- 69) “Dithienof[3,2-*b*;2',3'-*f*]phosphepinium-Based Near-Infrared Fluorophores: p_{σ} - π^* Conjugation Inherent to

Seven-Membered Phosphacycles”

K. Andoh, M. Murai,* P.-A. Bouit, M. Hissler, S. Yamaguchi,* *Angewandte Chemie International Edition*, 63, e202410204 (2024).

- 70) “Controlling Redox and Wire-Like Charge-Delocalization Properties of Dinuclear Mixed-Valence Complexes with MCp*(dppe) (M = Fe, Ru) Termini Bridged by Metalloporphyrin Linkers”
M. Murai, K. Ono, Y. Tanaka, M. Akita,* *ACS Organic & Inorganic Au*, 4, 504–516 (2024).
Invited contribution to virtual special issue “*Electrochemical Explorations in Organic and Inorganic Chemistry*”.
- 71) “Sulfur-Bridged Cationic Diazulenomethenes: Charge-Segregated Assembly of π -Conjugated Cations Toward Charge-Carrier Transport Application”
S. Takahashi, M. Murai,* T. Hattori, S. Seki,* T. Yanai, S. Yamaguchi,* *Journal of the American Chemical Society*, 146, 22642–22649 (2024). *ChemRxiv* 2024, preprint (DOI: 10.26434/chemrxiv-2024-k45wj).
Press released by Nagoya Univ., Kyoto Univ., and JST.

B. 招待 or 依頼講演

- 1) “遷移金属触媒を用いる多環芳香族炭化水素の効率的合成法とその官能基化法の開発”
村井征史, 第3回化学フロンティア研究会
岡山, 2014年 7月
- 2) “9-シラフルオレンの用途と脱水素を伴うケイ素化反応を利用した最近の研究の展開”
村井征史, 田岡化学工業講演会
田岡化学工業株式会社, 2016年 1月
- 3) “Rhenium-catalyzed *anti*-Markovnikov addition reaction of carbon nucleophiles to unactivated terminal acetylenes”
M. Murai, International Symposium on Pure & Applied Chemistry (ISPAC)
Ho Chi Minh (Vietnam), June, 2017
- 4) “Transition metal-catalyzed intermolecular dehydrogenative silylation of aromatic compounds without directing groups based on the regio- and chemoselective C–H bond activation”
M. Murai, 8th Annual Global Congress of Catalysis 2017
Shanghai (China), October, 2017
- 5) “金属触媒を用いた炭化水素の効率的な機能化法の開発”
村井征史, 第13回触媒相模セミナー
東ソー東京研究センター (山川哲 主席研究員), 2017年 11月
- 6) “金属活性種的设计に基づく炭化水素の選択的な直截官能基化”
村井征史, 日本化学会第98春季年会 (進歩賞受賞講演)
日本大学, 2018年 3月
- 7) “Rhenium-catalyzed intermolecular *anti*-Markovnikov addition reaction of 1,3-dicarbonyl compounds with terminal alkynes”
M. Murai, K. Takai, 28th International Conference on Organometallic Chemistry (ICOMC 2018)
Florence (Italy), July, 2018
- 8) “金属触媒による配向基を用いない不飽和炭化水素の官能基化”
村井征史, 京大人環 分子環境相関論サマーセミナー2018
京都大学 (藤田健一 教授), 2018年 9月
- 9) “ヘテロ配向基を用いない不飽和分子の位置選択的な直截官能基化”

村井征史, 第45回オルガノメタリックセミナー
広島大学 (吉田拓人 教授), 2018年10月

- 10) “*Gem*-ジクロムメタン反応剤から発生するクロムアルキリデン種による1,*n*-エンインの環化反応”
村井征史, 第9回有機分子構築法 夏の勉強会
湯河原, 2019年5月
- 11) “Regioselective benzannulation of PAHs *via* rhenium-catalyzed deoxygenation of 7-oxabicyclo[2.2.1]hepta-2,5-diene”
M. Murai, International Congress on Pure & Applied Chemistry (ICPAC)
Yangon (Myanmar), August, 2019
- 12) “酸素や水素の脱離を伴う官能基化芳香族化合物の触媒的な迅速合成”
村井征史, 第8回化学フロンティア研究会
有馬, 2019年8月
- 13) “7員環と電荷の組み込みを設計戦略とする機能性色素の開発”
村井征史, 第12回化学フロンティア研究会
名古屋, 2023年10月
- 14) “Design and synthesis of key nonbenzenoid core units realizing near-infrared emission”
M. Murai, 2023 International IRCCS-IRTG-ILR Symposium on “New Horizons of Molecular Functions”
Nagoya (December), 2023
- 15) “Azulene-fusing strategy to control molecular assembly: Application to near-infrared dyes and carrier transporting materials”
M. Murai, 12th Singapore International Chemical Conference (SICC-12)
Singapore (December), 2024

C. 招待講演を除く口頭発表 (本人による主要学会での発表分のみ)

- 1) “アズレン骨格を有する新規 π 共役ポリマー: 7員環連結によって発現する特異な刺激応答性”
村井征史, Craig J. Hawker, 第23回基礎有機化学討論会
京都, 2012年9月
- 2) “Development of azulene-based novel π -conjugated molecules: Enhancement of dipolar leading to unique stimuli-responsiveness”
M. Murai, C. J. Hawker, 12th International Kyoto Conference on New Aspects of Organic Chemistry (IKCOC 12)
Kyoto, November, 2012
- 3) “Bismuth(III)-catalyzed dehydrative etherification and thioetherification of phenolic hydroxy groups”
村井征史, 折口和希, 高井和彦, 第61回有機金属化学討論会
九州大学, 2014年9月
- 4) “Iridium-catalyzed intermolecular dehydrogenative silylation of polycyclic aromatic hydrocarbons based on the regio- and chemoselective C-H bond activation”
M. Murai, K. Takami, K. Takai, 第62回有機金属化学討論会
関西大学, 2015年9月
- 5) “Regioselective benzoannulation of PAHs *via* the rhenium-catalyzed deoxygenation of 7-oxabicyclo[2.2.1]-hepta-2,5-diene”
M. Murai, K. Takai, International Symposium on JST ACT-C Project ~Invention of π -Electronic Organic Molecules toward Electronic Energy Devices~

Okayama, July, 2017

- 6) “Rhenium-catalyzed *anti*-Markovnikov addition reaction of carbon nucleophiles to unactivated terminal acetylenes”
M. Murai, K. Takai, 14th International Kyoto Conference on New Aspects of Organic Chemistry (IKCOC 14)
Kyoto, November, 2018
- 7) “Cyclization of 1,*n*-enynes and 5-alkynylketones initiated by the addition reaction of *gem*-dichromiomethane reagents to alkynes”
M. Murai, R. Taniguchi, K. Takai, 第 66 回有機金属化学討論会
首都大学, 2019 年 9 月
- 8) “Silicon-bridged diazulenylmethyl cations as a π -extended cationic motif to form *J*-aggregates with near-infrared emission”
M. Murai, S. Yamaguchi, 15th International Symposium on Functional π Electron Systems (F π -15)
Raleigh (USA), June, 2023
- 9) “カチオン性近赤外色素の設計と合成”
村井征史, 持続社会発展のための機能化学研究委員会 第 8 回定期研究会
東京, 2023年10月
- 10) “Alignment of azulene-based cationic π -skeletons toward functional π -materials”
M. Murai, 15th International Kyoto Conference on New Aspects of Organic Chemistry (IKCOC 15)
Kyoto, November, 2023
- 11) “Group 14 element-bridged cationic diazulenylmethenes forming *J*-aggregates with near-infrared emission”
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- 12) “Si, Ge, and Sn-bridged π -conjugated carbocations: Azulene-fusing strategy for designing near-infrared dyes”
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- 13) “Control of Molecular Assembly by Azulene Fusion toward Functional π -Materials”
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D. 解説記事

- 1) “Photoinitiated click reactions for the creation of spatially defined materials”
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- 2) “Manchester大学Procter研究室(UK)とUCSB Hawker研究室(USA)での研究と留学生活”
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- 3) “元素の個性の再探求による新反応の確立と新物質の創製”
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- 4) “電子供与性配位子としてのカルボジカルベンの化学”
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- 5) “多環芳香族炭化水素の効率的な機能化法の開発 (飛翔する若手研究者欄)”

村井征史, 化学と工業 (11月号), 69, 981–982 (2016), 日本化学会発行.

- 6) “新たな視点から (インタビュー記事)”
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- 7) “ケイ素機能性化学: ケイ素を含む π 電子系の発展と展望”
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E. 特許

- 1) “多環芳香族化合物及びその製造方法”
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- 2) “ニトロ基を有する9-シラフルオレン化合物及びその製造方法”
村井征史, 高井和彦, 特願 2018-209329.
- 3) “トロピリウム化合物及びそれを用いた蛍光色素”
村井征史, 伊藤優衣, 山口茂弘, 特願 2023-034651.
- 4) “カチオン性ホスホニウムで架橋したラダー型蛍光色素”
多喜正泰, 山口茂弘, 村井征史, 袴田綾人, 特願 2023.

F. 競争的資金の取得状況

- 1) 日本学術振興会 特別研究員奨励費 (DC2), 2008–2009年度, 研究代表者
- 2) 日本学術振興会 特別研究員奨励費 (PD), 2010–2012年度, 研究代表者
- 3) 岡山大学 若手研究者スタートアップ研究支援, 2013–2014年度, 研究代表者
- 4) 有機合成化学協会 ADEKA研究企画賞2014, 2014–2015年度, 研究代表者
- 5) 科学研究費補助金 若手(B), 2014–2015年度, 研究代表者
- 6) 科学研究費補助金 基盤(A), 2014–2017年度, 研究分担者
- 7) 岡山工学振興会 研究奨励賞, 2014–2015年度, 研究代表者
- 8) 公益財団法人ウエスコ学術振興財団 学術研究費助成, 2015–2016年度, 研究代表者
- 9) 岡山工学振興会 国際研究集会等派遣助成金, 2015年, 代表者
- 10) 住友財団2015年度基礎科学研究助成, 2015–2016年度, 研究代表者
- 11) 科学研究費補助金 基盤(C), 2016–2018年度, 研究代表者
- 12) 八雲環境財団 国際研究交流助成, 2017年, 代表者
- 13) 科学研究費補助金 基盤(A), 2018–2021年度, 研究分担者
- 14) 公益財団法人京都技術科学センター研究開発助成, 2019年度, 研究代表者
- 15) 科学研究費補助金 基盤(B), 2019–2022年度, 研究代表者
- 16) 東京生化学研究会 研究奨励金 I, 2020年度, 研究代表者
- 17) 豊田理研スカラー, 2021年度, 研究代表者
- 18) 池谷科学技術振興財団 単年度研究助成A, 2021年度, 研究代表者

- 19) 総合工学振興財団 研究奨励金, 2021年度, 研究代表者
- 20) 立松財団 一般研究助成, 2022年度, 研究代表者
- 21) 科学研究費補助金 学術変革領域研究(A), 公募研究, 2023-2024年度, 研究代表者
- 22) 2023年度創発的研究支援事業, 2024年度~, 研究代表者