

# Curriculum Vitae

## Kenichiro Itami

*Molecule Creation Laboratory, RIKEN Cluster for Pioneering Research, RIKEN,  
Wako, Saitama 351-0198, Japan*

*E-mail: kenichiro.itami@riken.jp*

*Website (Itami Lab): <https://itami-lab.com/>*



### Current appointments

Chief Scientist and Director, Molecule Creation Laboratory, RIKEN, Japan

Principal Investigator, Institute of Transformative Bio-Molecules (ITbM), Nagoya University, Japan

Joint Appointment Research Fellow, Institute of Chemistry, Academia Sinica, Taiwan

### Date of birth

April 4, 1971

### Citizenship

Japanese

### Education

- 1990~1994 B.S. in Chemistry, Kyoto University, Japan  
Advisor: Prof. Hisanobu Ogoshi
- 1994~1996 M.S. Graduate Student in Chemistry, Kyoto University, Japan  
Advisor: Prof. Yoshihiko Ito
- 1996~1998 Ph.D. Graduate Student in Chemistry, Kyoto University, Japan  
Advisor: Prof. Yoshihiko Ito
- 1996~1998 JSPS Research Fellowship for Young Scientists
- 1997~1998 Exchange Student, Uppsala University, Sweden (Prof. Jan-E. Bäckvall)

### Academic career

- 1998~2005 Assistant Professor, Kyoto University (with Prof. Jun-ichi Yoshida)
- 2005~2008 Associate Professor, Nagoya University (with Prof. Ryoji Noyori)
- 2005~2009 JST, PRESTO, Researcher
- 2008~2024 Professor, Department of Chemistry, Graduate School of Science, Nagoya University
- 2012~2022 Director, Institute of Transformative Bio-Molecules (ITbM), Nagoya University
- 2012~present Principal Investigator, ITbM, Nagoya University
- 2013~2020 Research Director, JST-ERATO Itami Molecular Nanocarbon Project
- 2019~present Joint Appointment Research Fellow, Institute of Chemistry, Academia Sinica, Taiwan
- 2024~present Chief Scientist and Director, Molecule Creation Laboratory, RIKEN

## Research fields

Organic chemistry, synthetic chemistry, molecular nanocarbon science, catalytic chemistry, materials science, chemical biology

## Summary of research achievements

Papers & book chapters	414 articles
Representative papers	<i>Science</i> (4), <i>Nature Chem.</i> (4), <i>Nature Commun.</i> (9), <i>Nature Synth.</i> (1), <i>Nature Catal.</i> (1), <i>Nature Chem. Biol.</i> (2), <i>Proc. Nat. Acad. Sci. USA</i> (1), <i>J. Am. Chem. Soc.</i> (58), <i>Angew. Chem.</i> (41), <i>Chem</i> (4), <i>ACS Cent. Sci.</i> (1), <i>Chem. Sci.</i> (24) [as of December 7th, 2023]
Citations	>27,000 times
H-index	88 (Web of Science, <a href="#">ResearcherID: B-5110-2011</a> ), 99 ( <a href="#">Google Scholar</a> )
Patents & patent application	99 files
Commercialization	22 compounds
Awards & honors	47 awards and honors
Alumni in academic	52 researchers
Plenary & invited lectures	445 times

## Awards, honors, and named lectureships (47)

2023	Irvine Organic Synthesis Lecturer, University of California, Irvine, USA
2023	The Job Lecturer, Memorial University of Newfoundland, Canada
2023	The Paul G. Gassman Lecturer, University of Minnesota, USA
2022	Frontiers of EOC Lectureship, Nankai University, China
2022	The Reuben Benjamin Sandin Lecturer, University of Alberta, Canada
2022	ChemSoc Lecturer, University of New South Wales (UNSW) Sydney, Australia
2021	Highly Cited Researchers 2021, Clarivate Analytics
2020	Highly Cited Researchers 2020, Clarivate Analytics
2019	Highly Cited Researchers 2019, Clarivate Analytics
2018	The Netherlands Scholar Award for Supra-molecular Chemistry
2018	Highly Cited Researchers 2018, Clarivate Analytics
2018	The Guthikonda Lecturer, Stanford University
2018	The Roland K. Pettit Centennial Lecturer, University of Texas, Austin, USA
2018	CSJ Award for Creative Work, The Chemical Society of Japan
2017	Highly Cited Researchers 2017, Clarivate Analytics
2017	ICI Distinguished Lecturer, University of Calgary, Canada
2017	The Chunichi Cultural Award
2017	The Bristol-Myers Squibb Lecturer, University of California, Berkeley, USA
2017	The Yomiuri Techno Forum Gold Medal Prize
2017	The SYNLETT Best Paper Award 2016, Thieme
2016	The Holger Erdtman Lecturer, KTH, Sweden
2016	The Nagase Prize
2016	Treat B. Johnson Lecturer, Yale University, USA
2016	Ta-Shue Chou Lectureship Award, Academia Sinica, Taiwan
2015	R. C. Fuson Visiting Professor, University of Illinois at Urbana-Champaign, USA
2015	Arthur C. Cope Scholar Award, American Chemical Society
2015	Swiss Chemical Society Lectureship Award
2014	Nankai University Lectureship Award, China

2014	The Aldrich Lectureship Award, Emory University, USA
2014	The JSPS Prize
2013	Novartis Chemistry Lectureship Award
2013	Mukaiyama Award
2013	Asian Rising Star Award, Asian Chemical Congress
2012	Fellow of the Royal Society of Chemistry, UK
2012	German Innovation Award "Gottfried Wagener Prize"
2012	Novartis-MIT Lecturer in Organic Chemistry (MIT, USA)
2011	ACP Lectureship Award, China
2011	ACP Lectureship Award, Malaysia
2011	Nozoe Memorial Award for Young Organic Chemists
2011	Overseas Distinguished Professor of Wuhan University, China
2008	Merck-Banyu Lectureship Award
2007	Banyu Young Chemist Award
2006	Minister's Award for Distinguished Young Scientists (MEXT)
2005	Mitsui Chemicals Catalysis Science Award of Encouragement
2005	The Chemical Society of Japan Award for Distinguished Young Chemists
2004	Thieme Journals Award
2000	Nissan Chemical Industries Award in Synthetic Organic Chemistry, Japan

### Visiting professorship

2007	Kyushu University, Japan
2008	Tokyo Institute of Technology, Japan
2008	Kyoto University, Japan
2009	Kyoto University, Japan
2011	Wuhan University, China (Overseas Distinguished Professor)
2012	Osaka University, Japan
2014	University of Shizuoka, Japan
2013~15	The University of Tokyo, Japan
2015	Chiba University, Japan
2015	Okayama University, Japan
2015	Gifu Pharmaceutical University, Japan
2016	Hokkaido University, Japan
2018	Nagasaki University, Japan
2020	Shunshu University, Japan
2020	Chiba University, Japan
2021	The University of Tokyo, Japan
2025	Kwansei Gakuin University, Japan

### Editors and advisory board

2008~2011	<i>Canadian Journal of Chemistry</i> (Advisory Board)
2011~2017	<i>Organic &amp; Biomolecular Chemistry</i> , RSC (Editorial Board)
2012~2022	<i>Beilstein Journal of Organic Chemistry</i> (Associate Editor)
2013~2016	<i>ChemCatChem</i> (International Advisory Board)
2013~present	<i>Bulletin of the Chemical Society of Japan</i> (Senior Editor)
2014~2021	<i>Chemistry - An Asian Journal</i> (International Advisory Board)
2014~present	<i>Advanced Synthesis &amp; Catalysis</i> (Academic Advisory Board)

2015~present	<i>The Chemical Record</i> (Editorial Board)
2015~present	<i>Tetrahedron/Tetrahedron Letters</i> (Advisory Board)
2016~2018	<i>Accounts of Chemical Research</i> (Editorial Advisory Board)
2016~2023	<i>Chem, Cell Press</i> (Editorial Board)
2017~2020	<i>Angewandte Chemie</i> (International Advisory Board)
2019~present	<i>ACS Central Science</i> (Editorial Advisory Board)
2021~present	<i>Tetrahedron Chem</i> (Advisory Board)
2022~present	<i>Precision Chemistry, ACS</i> (Associate Editor)

### Selection committee of awards

2008~2014	Yoshimasa Hirata Memorial Lectureship, selection committee
2014~present	Hirata Award, selection committee
2017~2019	Mukaiyama Award, selection committee
2008~2024	Nagoya Medal Prize of Organic Chemistry, selection committee
2014~2022	Nagoya Medal Prize of Organic Chemistry, head of selection committee
2021	Tetrahedron Prize, selection committee

### Commercialized compounds (22)

[15]Cycloparaphenylene, [\[15\]CPP](#) (Kanto Chemical)  
 [12]Cycloparaphenylene, [\[12\]CPP](#) (TCI, Kanto Chemical)  
 [11]Cycloparaphenylene, [\[11\]CPP](#) (TCI)  
 [10]Cycloparaphenylene, [\[10\]CPP](#) (TCI)  
 [9]Cycloparaphenylene, [\[9\]CPP](#) (TCI, Kanto Chemical)  
 [8]Cycloparaphenylene, [\[8\]CPP](#) (TCI)  
 [7]Cycloparaphenylene, [\[7\]CPP](#) (TCI)  
 Methylene-bridged [6]cycloparaphenylene, [\[6\]MCPP](#) (TCI)  
 (6,6)Carbon nanobelt bis(tetrahydrofuran) adduct, [\(6,6\)CNB](#) (TCI)  
 Warped nanographene, [WNG](#) (Kanto Chemical)  
 [1,2-Bis(dicyclohexylphosphino)ethane]dicarbonylnickel(0), [Ni\(dcype\)\(CO\)<sub>2</sub>](#) (Kanto Chemical)  
 3,4-Bis(dicyclohexylphosphino)thiophene, [dcypt](#) (Kanto Chemical)  
 2,2'-Bis[bis(3,5-dimethylphenyl)phosphino]-1,1'-biphenyl, [Xyl-BIPHEP](#) (TCI)  
 5-Adamantyl-IAA, [super-strong auxin](#) (TCI)  
 Yoshimulactone Green, [YLG](#) (TCI)  
 AMOR, [glyco-enhancer of plant fertilization](#) (TCI)  
 Vinylboronic acid pinacol ester (TCI, Sigma-Aldrich)  
 Bis(dimethyl(2-pyridyl)silyl)methane (TCI)  
 2-(Allyldimethylsilyl)pyridine (Sigma-Aldrich)  
 2-(Dimethylvinylsilyl)pyridine (TCI, Sigma-Aldrich)  
 2-(Trimethylsilyl)pyridine (TCI, Sigma-Aldrich)  
 2-(Dimethylsilyl)pyridine (Sigma-Aldrich)

### Selected interviews and public lectures

[Chem-Station Spotlight Research](#) (Chem-Station)  
[Changing the world with super molecules](#) (Toshin Highschool)  
[Frontier Salon Teacher Introduction](#) (Frontier Salon Foundation)  
[Portrait of researchers](#) (Technologist Magazine)  
[Front runners](#) (Nikkei Science)

[Chem-Station Virtual Symposium](#) (YouTube)  
[Essay in the Chemical Society of Japan](#)  
[Introduction of ITbM](#) (YouTube)  
[A conversation with Kenichiro Itami](#) (ACS Central Science)  
[Carbon nanobelt commercialized from TCI](#) (YouTube)  
[Commercialization of carbon nanobelt from TCI](#) (YouTube)  
[The moment of the world-first synthesis of carbon nanobelt](#) (YouTube)  
[Interview with Stuart L. Schreiber](#) (YouTube)  
[Interview with Zhaomin Hou](#) (YouTube)  
[The symposium of WPI 10<sup>th</sup> anniversary](#) (YouTube)  
[WPI Science Talk Live 2013](#) (YouTube)  
[MBLA 10th Anniversary Special Lectures](#) (YouTube)  
[Angewandte Festsymposium](#) (ChemistryViews)  
[2015 National Organic Chemistry Symposium](#) (American Chemical Society)  
[Interview of Chem-Station](#) (Chem-Station)  
[Author Profile](#) (*Angew. Chem. Int. Ed.*)

## The 30 must-read papers

### A. Molecular nanocarbon science

- (A14) "Perfluorocycloparaphenylenes" H. Shudo *et al.*, **Nature Commun.** 2022, 13, 3713.
- (A13) "Synthesis of a Möbius carbon nanobelt" Y. Segawa *et al.*, **Nature Synth.** 2022, 1, 535-541.
- (A12) "Infinitene: A helically twisted figure-eight [12]circulene topoisomer" M. Krzeszewski *et al.*, **J. Am. Chem. Soc.** 2022, 144, 862-871.
- (A11) "Synthesis of a zigzag carbon nanobelt" K. Y. Cheung *et al.*, **Nature Chem.** 2021, 13, 255-259.
- (A10) "Creation of negatively curved polyaromatics enabled by annulative coupling that forms an eight-membered ring" S. Matsubara *et al.*, **Nature Catal.** 2020, 3, 710-718.
- (A9) "A nonalternant aromatic belt: Methylene-bridged [6]cycloparaphenylene synthesized from pillar[6]arene" Y. Li *et al.*, **J. Am. Chem. Soc.** 2020, 142, 12850-12856.
- (A8) "Topological molecular nanocarbons: all-benzene catenane and trefoil knot" Y. Segawa *et al.*, **Science** 2019, 365, 272-276.
- (A7) "A water-soluble warped nanographene: Synthesis and applications for photo-induced cell death" H.-A. Lin *et al.*, **Angew. Chem. Int. Ed.** 2018, 57, 2874-2878.
- (A6) "Synthesis of partially and fully fused polyaromatics by annulative chlorophenylene dimerization" Y. Koga *et al.*, **Science** 2018, 359, 435-439.
- (A5) "Synthesis of a carbon nanobelt" G. Povie *et al.*, **Science** 2017, 356, 172-175.
- (A4) "Structurally uniform and atomically precise carbon nanostructures" Y. Segawa *et al.*, **Nature Rev. Mat.** 2016, 1, 15002.
- (A3) "A grossly warped nanographene and the consequences of multiple odd-membered-ring defects" K. Kawasumi *et al.*, **Nature Chem.** 2013, 5, 739-744.
- (A2) "Initiation of carbon nanotube growth by well-defined carbon nanorings" H. Omachi *et al.*, **Nature Chem.** 2013, 5, 572-576.
- (A1) "Selective synthesis of [12]cycloparaphenylene" H. Takaba *et al.*, **Angew. Chem. Int. Ed.** 2009, 48, 6112-6116.

### B. Synthetic methods and catalysts

- (B10) "Diversity-oriented synthesis of nanographenes enabled by dearomative annulative  $\pi$ -extension" W. Matsuoka *et al.*, **Nature Commun.** 2021, 12, 3940.

- (B9) "Annulative  $\pi$ -extension (APEX): Rapid access to fused aromatics, heteroaromatics, and nanographenes" H. Ito *et al.*, **Angew. Chem. Int. Ed.** 2017, 56, 11144-11164.
- (B8) "One-shot K-region-selective annulative  $\pi$ -extension for nanographene synthesis and functionalization" K. Ozaki *et al.*, **Nature Commun.** 2015, 6, 6251.
- (B7) "Synthesis and characterization of hexaarylbenzenes with five or six different substituents enabled by programmed synthesis" S. Suzuki *et al.*, **Nature Chem.** 2015, 7, 227-233.
- (B6) "C-H bond functionalization: Emerging synthetic tools for natural products and pharmaceuticals" J. Yamaguchi *et al.*, **Angew. Chem. Int. Ed.** 2012, 51, 8960-9009.
- (B5) "Nickel-catalyzed C-H/C-O coupling of azoles with phenol derivatives" K. Muto *et al.*, **J. Am. Chem. Soc.** 2012, 134, 169-172.
- (B4) "Direct arylation of polycyclic aromatic hydrocarbons through palladium catalysis" K. Mochida *et al.*, **J. Am. Chem. Soc.** 2011, 133, 10716-10719.
- (B3) "Programmed synthesis of tetraarylthiophenes through sequential C-H arylation" S. Yanagisawa *et al.*, **J. Am. Chem. Soc.** 2009, 131, 14622-14623.
- (B2) "Potassium *t*-butoxide alone can promote the biaryl coupling of electron-deficient nitrogen heterocycles and haloarenes" S. Yanagisawa *et al.*, **Org. Lett.** 2008, 10, 4673-4676.
- (B1) "Direct C-H arylation of (hetero)arenes with aryl iodides via rhodium catalysis" S. Yanagisawa *et al.*, **J. Am. Chem. Soc.** 2006, 128, 11748-11749.

### C. Chemical chronobiology

- (C3) "Photopharmacological manipulation of mammalian CRY1 for regulation of the circadian clock" D. Kolarski *et al.*, **J. Am. Chem. Soc.** 2021, 143, 2078-2087.
- (C2) "Cell-based screen identifies a new potent and highly selective CK2 inhibitor for modulation of circadian rhythms and cancer cell growth" T. Oshima *et al.*, **Science Adv.** 2019, 5, eau9060.
- (C1) "C-H activation generates period-shortening molecules that target Cryptochrome in the mammalian circadian clock" T. Oshima *et al.*, **Angew. Chem. Int. Ed.** 2015, 54, 7193-7197.

### D. Plant chemical biology

- (D3) "Discovery of 2,6-dihalopurines as stomata opening inhibitors: Implication of an LRX-mediated H<sup>+</sup>-ATPase phosphorylation pathway" A. Ueda *et al.*, **ACS Chem. Biol.** 2023, 18, 347-355.
- (D2) "Discovery of plant growth stimulants by C-H arylation of 2-azahypoxanthine" H. Kitano *et al.*, **Org. Lett.** 2018, 20, 5684-5687.
- (D1) "Discovery of synthetic small molecules that enhance the number of stomata: C-H functionalization chemistry for plant biology" A. Ziadi *et al.*, **Chem. Commun.** 2017, 53, 9632-9635.

## List of all papers (414 papers)

### [Preprints or submitted]

- (414) TBA  
Daiki Imoto, Hiroki Shudo, Kiichi Mizukami, Nobuo Kimizuka, Akiko Yagi, Kenichiro Itami  
Submitted.
- (413) Stable cationic nanobelts synthesized by chemical oxidation of methylene-bridged [6]cycloparaphenylene  
Nobushige Kai, Hideya Kono, Timo Stünkel, Daiki Imoto, Riccardo Zanasi, Guglielmo Monaco, Francesco F. Summa, Lawrence T. Scott, Akiko Yagi, Kenichiro Itami  
Submitted.  
**ChemRxiv**, DOI: [10.26434/chemrxiv-2024-jh80w](https://doi.org/10.26434/chemrxiv-2024-jh80w)
- (412) TBA  
Yuta Morinaka, Hideto Ito, Kazuhiro J. Fujimoto, Takeshi Yanai, Yohei Ono, Tsuyoshi Tanaka, Kenichiro Itami  
Submitted.
- (411) TBA  
Kasumi Yasuda Francois Berenger, Kazuma Amaike, Ayaka Ueda, Tomoya Nakagomi, Genki Hamasaki, Chen Li, Noriko Yuyama Otani, Kazuma Kaitoh, Koji Tsuda, Kenichiro Itami, Yoshihiro Yamanishi  
Submitted.
- (410) In-insect synthesis of oxygen-doped molecular nanocarbons  
Atsushi Usami, Hideya Kono, Vic Austen, Quan Manh Phung, Hiroki Shudo, Tomoki Kato, Hayato Yamada, Akiko Yagi, Kazuma Amaike, Kazuhiro J. Fujimoto, Takeshi Yanai, Kenichiro Itami  
Submitted.  
**ChemRxiv**, DOI: [10.26434/chemrxiv-2024-1zd0b](https://doi.org/10.26434/chemrxiv-2024-1zd0b)
- (409) Carbon nanobelts  
Akiko Yagi, Daiki Imoto, Kenichiro Itami  
Submitted.
- (408) Ferrocene-based conjugated macrocycles: Shotgun synthesis, size-dependent properties and tunable fluorescence intensity  
Lingyun Zhu, Jingdong Xu, Bin Lan, Xinyu Chen, Hideya Kono, Hui Xu, Jianfeng Yan, Wenjuan Li, Akiko Yagi, Yaofeng Yuan, Kenichiro Itami, Yuanming Li  
Submitted.
- (407) Chemical inhibition of stomatal differentiation by perturbation of the master-regulatory bHLH heterodimer via an ACT-Like domain  
Ayami Nakagawa, Krishna Mohan Sepuru, Shu Jan Alicia Yip, Hyemin Seo, Calvin M. Coffin, Yasutomo Segawa, Rie Iwasaki, Hiroe Kato, Stephanie Kim, Yusuke Aihara, Toshinori Kinoshita, Kenichiro Itami, Soon-Ki Han, Kei Murakami, Keiko U. Torii  
Submitted.  
**bioRxiv**, DOI: [10.1101/2023.11.02.565226](https://doi.org/10.1101/2023.11.02.565226)

- (406) Effect of nanocarbon molecules on the *Arabidopsis thaliana* transcriptome  
Norihito Nakamichi, Ayato Sato, Yusuke Aihara, Toshinori Kinoshita, Yasutomo Segawa, Kazuma Amaike, Kenichiro Itami

*bioRxiv*, DOI: [10.1101/2020.05.22.110171v1](https://doi.org/10.1101/2020.05.22.110171v1)

**[Published papers and accounts]**

- (405) Separation of enantiomers of chiral fullerene derivatives through enantioselective encapsulation within an adaptable helical cavity of syndiotactic poly(methyl methacrylate) with helicity memory  
Daisuke Taura, Akiko Minami, Fumihiko Mamiya, Naoki Ousaka, Kenichiro Itami, Eiji Yashima

*Chirality* 2024, 36, e23663.

DOI: [10.1002/chir.23663](https://doi.org/10.1002/chir.23663)

- (404) Synthesis of diamondoids through hydrogenation of adamantane-annulated arenes

Yoshifumi Toyama, Takaku Yoshihara, Hiroki Shudo, Hideto Ito, Kenichiro Itami, Akiko Yagi

*Chem. Lett.* 2024, 53, upad037.

DOI: [10.1093/chemle/upad037](https://doi.org/10.1093/chemle/upad037)

*Selected as a Cover.*

- (403) Side-chain type ferrocene macrocycles

Bin Lan, Jindong Xu, Linyun Zhu, Xinyu Chen, Hideya Kono, Peihan Wang, Xin Zuo, Jianfeng Yan, Akiko Yagi, Yongshen Zheng, Songhua Chen, Yaofeng Yuan, Kenichiro Itami, Yuanming Li

*Precis. Chem.* 2024, 2, 143-150.

DOI: [10.1021/prechem.3c00121](https://doi.org/10.1021/prechem.3c00121)

- (402) Switchable decarboxylation by energy- or electron-transfer photocatalysis

Yota Sakakibara, Kenichiro Itami, Kei Murakami

*J. Am. Chem. Soc.* 2024, 146, 1554-1562.

DOI: [10.1021/jacs.3c11588](https://doi.org/10.1021/jacs.3c11588)

*Featured in Chem-Station. Highlighted in Nikkei Shimbun.*

*ChemRxiv*, DOI: [10.26434/chemrxiv-2022-drf9p](https://doi.org/10.26434/chemrxiv-2022-drf9p)

- (401) Synthesis of heptagon-containing polyarenes by catalytic C-H activation

Keigo E. Yamada, Iain A. Stepek, Wataru Matsuoka, Hideto Ito, Kenichiro Itami

*Angew. Chem. Int. Ed.* 2023, 62, e202311770.

DOI: [10.1002/anie.202311770](https://doi.org/10.1002/anie.202311770)

*Highlighted in Synfacts.*

- (400) A small-molecule modulator affecting the clock-associated PSEUDO-RESPONSE REGULATOR 7 amount

Takahiro N. Uehara, Saori Takao, Hiromi Matsuo, Ami N. Saito, Eisuke Ota, Azusa Ono, Kenichiro Itami, Toshinori Kinoshita, Takafumi Yamashino, Junichiro Yamaguchi, Norihito Nakamichi

*Plant Cell Physiol.* 2023, 64, 1397-1406.

DOI: [10.1093/pcp/pcad107](https://doi.org/10.1093/pcp/pcad107)

*bioRxiv*, DOI: [10.1101/2020.05.25.113746](https://doi.org/10.1101/2020.05.25.113746)



- (399) Half-substituted fluorocycloparaphenylenes with high symmetry: Synthesis, properties and derivatization to densely substituted carbon nanorings  
Hiroki Shudo, Motonobu Kuwayama, Yasutomo Segawa, Akiko Yagi, Kenichiro Itami  
**Chem. Commun.** 2023, 59, 13494-13497.  
DOI: [10.1039/D3CC04887J](https://doi.org/10.1039/D3CC04887J)  
**ChemRxiv**, DOI: [10.26434/chemrxiv-2023-zsvnt](https://doi.org/10.26434/chemrxiv-2023-zsvnt)
- (398) Carbon nanobelts: Brief history and perspective  
Daiki Imoto, Akiko Yagi, Kenichiro Itami  
**Precis. Chem.** 2023, 1, 516-523.  
DOI: [10.1021/prechem.3c00083](https://doi.org/10.1021/prechem.3c00083)  
*Selected as a Cover.*
- (397) Heteroatom-embedding annulative  $\pi$ -extension (hetero-APEX) reactions – An overview  
Hideto Ito, Kou P. Kawahara, Kenichiro Itami  
**Synthesis** 2024, 56, 1335-1354.  
DOI: [10.1055/a-2169-4078](https://doi.org/10.1055/a-2169-4078)
- (396) Noncovalent modification of cycloparaphenylene by catenane formation using an active metal template strategy  
Hisayasu Ishibashi, Manuel Rondelli, Hiroki Shudo, Takehisa Maekawa, Hideto Ito, Kiichi Mizukami, Nobuo Kimizuka, Akiko Yagi, Kenichiro Itami  
**Angew. Chem. Int. Ed.** 2023, 62, e202310613.  
DOI: [10.1002/anie.202310613](https://doi.org/10.1002/anie.202310613)  
*Selected as Hot Paper. Highlighted in Mynavi News.*  
**ChemRxiv**, DOI: [10.26434/chemrxiv-2023-3rq4x](https://doi.org/10.26434/chemrxiv-2023-3rq4x)
- (395) Divergent transformation of carboxylic acids through photocatalytic decarboxylation with hypervalent iodine reagents  
Yota Sakakibara, Kenichiro Itami, Kei Murakami  
**J. Synth. Org. Chem. Jpn.** 2023, 81, 1050-1061.  
DOI: [10.5059/yukigoseikyokaishi.81.1050](https://doi.org/10.5059/yukigoseikyokaishi.81.1050)
- (394) A small compound, HYGIC, promotes hypocotyl growth through ectopic ethylene response  
Mizuki Muraio, Rika Kato, Rina Hisamatsu, Hitoshi Endo, Yasuki Kawabata, Seisuke Kimura, Ayato Sato, Kenichiro Itami, Keiko U. Torii, Shinya Hagihara, Naoyuki Uchida  
**Plant Cell Physiol.** 2023, 64, 1167-1177.  
DOI: [10.1093/pcp/pcad083](https://doi.org/10.1093/pcp/pcad083)
- (393) Nickel/photoredox-catalyzed decarboxylative coupling of aryl bromides with *N*-protected glycine as an aminomethyl source  
Jaehyun Jung, Takumi Kinoshita, Yuta Makihara, Yota Sakakibara, Kazuma Amaike, Kei Murakami, Kenichiro Itami  
**Synlett** 2024, 35, 337-341.  
DOI: [10.1055/s-0041-1738444](https://doi.org/10.1055/s-0041-1738444)
- (392) The first synthesis of carbon nanobelts: The 'belt' festival and the drama behind

(account in Japanese)  
Kenichiro Itami

**Dramatic Synthetic Organic Chemistry**, Kagaku Dojin, 2023, 74-75.  
[https://www.ssoci.jp/symposium/80th/80th\\_book.pdf](https://www.ssoci.jp/symposium/80th/80th_book.pdf)

- (391) Adamantane annulation to arenes: A strategy for property modulation of aromatic  $\pi$ -systems  
Takaku Yoshihara, Hiroki Shudo, Akiko Yagi, Kenichiro Itami  
**J. Am. Chem. Soc.** 2023, 145, 11754-11763.  
DOI: [10.1021/jacs.3c02788](https://doi.org/10.1021/jacs.3c02788)  
*Featured in Chem-Station.*  
*Highlighted in EE Times Japan, ITmedia, Yahoo! Japan, Synfacts.*  
**ChemRxiv**, DOI: [10.26434/chemrxiv-2023-1jsp4](https://doi.org/10.26434/chemrxiv-2023-1jsp4)
- (390) Expanded [2,1][*n*]carbohelicenes with 15- and 17-benzene rings  
Michihisa Toya, Takuya Omine, Fumitaka Ishiwari, Akinori Saeki, Hideto Ito, Kenichiro Itami  
**J. Am. Chem. Soc.** 2023, 145, 11553-11565.  
DOI: [10.1021/jacs.3c00109](https://doi.org/10.1021/jacs.3c00109)  
**ChemRxiv**, DOI: [10.26434/chemrxiv-2023-k9pzi](https://doi.org/10.26434/chemrxiv-2023-k9pzi)
- (389) Identification and improvement of isothiocyanate-based inhibitors on stomatal opening to act as drought tolerance-conferring agrochemicals  
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Kei Muto, Junichiro Yamaguchi, Aiwen Lei, Kenichiro Itami

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Anna Junker, Dirk Schepmann, Junichiro Yamaguchi, Kenichiro Itami, Andreas Faust, Klaus Kopka, Stefan Wagner, Bernhard Wünsch

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Takahiro N. Uehara, Junichiro Yamaguchi, Kenichiro Itami

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Satoshi Tani, Takahiro N. Uehara, Junichiro Yamaguchi, Kenichiro Itami

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Lingkui Meng, Yuko Kamada, Kei Muto, Junichiro Yamaguchi, Kenichiro Itami

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Kenichiro Itami, Junichiro Yamaguchi, Kei Muto
- (18) Carbon nanotube manufacturing method  
[EP-2684844-A1](#)  
Kenichiro Itami, Yasutomo Segawa, Hisanori Shinohara, Ryo Kitaura
- (17) Carbon nanotube manufacturing method  
[US-9527737-B2](#)
- (16) Carbon nanotube manufacturing method  
JP-2013-503617 (再表 2012/121354)  
Kenichiro Itami, Yasutomo Segawa, Hisanori Shinohara, Ryo Kitaura
- (15) Carbon nanoring and method for producing a ring-shaped compound suitable as a starting material for production of the same  
[US-2013324768-A1](#)  
Kenichiro Itami, Yasutomo Segawa, Shinpei Miyamoto, Haruka Omachi, Sanae Matsuura, Petr Senel
- (14) Carbon nanoring and method for producing a ring-shaped compound suitable as a starting material for production of the same  
JP-2012-504485 (再表 2011/111719)  
Kenichiro Itami, Yasutomo Segawa, Shinpei Miyamoto, Haruka Omachi, Sanae Matsuura, Petr Senel
- (13) Method of manufacturing phenyl substitution heterocyclic derivative by coupling process using nickel catalyst  
[JP-2012-096999 \(特開 2012-096999\)](#)  
Kenichiro Itami, Junichiro Yamaguchi, Jerome Canivet, Ikuya Ban
- (12) Carbon nanoring and method for producing a ring-shaped compound suitable as a starting material for production of the same  
JP-2011-553904 (再表 2011/099588)  
Kenichiro Itami, Yasutomo Segawa, Haruka Omachi, Sanae Matsuura, Katsuma Matsui
- (11) Nitrogen-containing heterocyclic compound and method for preparing the same  
[JP-2011-178752 \(特開 2011-178752\)](#)  
Kenichiro Itami, Junichiro Yamaguchi, Debashis Mandal, Atsushi Yamaguchi
- (10) Fullerene derivative, and process for producing the same  
[JP-2011-051930 \(特開 2011-051930\)](#)  
Kenichiro Itami, Masakazu Nambo
- (9) Compound containing a plurality of olefin bonds and method of selectively manufacturing it  
[JP-2005-289987 \(特開 2005-289987\)](#)

- Junichi Yoshida, Kenichiro Itami
- (8) Multi-substituted butadiene and selective method for producing the same  
[JP-2005-255562 \(特開 2005-255562\)](#)  
Junichi Yoshida, Kenichiro Itami
- (7) Multi-substituted pyrimidine and method for selectively producing the same  
[JP-2005-255561 \(特開 2005-255561\)](#)  
Junichi Yoshida, Kenichiro Itami
- (6) Polysubstituted olefin and method for selectively producing the same  
[JP-2005-232036 \(特開 2005-232036\)](#)  
Junichi Yoshida, Kenichiro Itami
- (5) Method for breaking carbon-silicon bond by supercritical fluid  
[JP-2004-323436 \(特開 2004-323436\)](#)  
Junichi Yoshida, Kenichiro Itami, Okitsugu Kajimoto
- (4) 2-pyridylsilane, its production and intermediate, and production of alcohol from 2-pyridylsilane  
[US-6548673-B1](#)  
Junichi Yoshida, Kenichiro Itami, Seiji Suga
- (3) 2-pyridylsilane, processes for producing and using the same  
[US-2003139600-A1](#)  
Junichi Yoshida, Kenichiro Itami, Seiji Suga
- (2) Production of 2-pyridylsilane derivative  
[JP-2000-256371 \(特開 2000-256371\)](#)  
Junichi Yoshida, Kenichiro Itami, Seiji Suga
- (1) 2-pyridylsilane, its production and intermediate, and production of alcohol from 2-pyridylsilane  
[JP-2000-256370 \(特開 2000-256370\)](#)  
Junichi Yoshida, Kenichiro Itami, Seiji Suga

## Plenary, keynote, and invited lectures

- (447) "Passion-oriented and unplanned 19 years in Nagoya" The Farewell Lecture, Noyori Conference Hall, Nagoya University, February 19th, 2024.
- (446) "Molecular nanocarbon synthesis and beyond" The 15th International Kyoto Conference on New Aspects of Organic Chemistry (IKCOC-15), November 8-11th, 2023.
- (445) "Molecular nanocarbon science: Toward untapped fields with untapped molecules" Konika Minolta, Hachioji, Tokyo, November 14th, 2023.
- (444) "Molecular nanocarbon science: Toward untapped fields with untapped molecules" Advanced Materials Development Laboratory, Sumitomo Chemical, Tsukuba, November 13th, 2023.
- (443) "Molecular nanocarbon synthesis and beyond" Institute of Chemistry, Academia Sinica, Taiwan, November 7th, 2023.
- (442) "Catalyst-enabled molecular nanocarbon synthesis and nanocarbon biology" The Organic Synthesis Lecture, Department of Chemistry, University of California, Irvine, California, USA, October 19th, 2023.
- (441) "Synthesis of carbon nanorings and carbon nanobelts" The Organic Synthesis Lecture, Department of Chemistry, University of California, Irvine, California, USA, October 18th, 2023.
- (440) "Molecular nanocarbon synthesis and beyond" The Okamoto PRESTO Alumni Meeting, National Museum of Nature and Science, Ueno, Tokyo, Japan, October 6th, 2023.
- (439) "Catalyst-enabled molecular nanocarbon synthesis and nanocarbon biology" The Job Lecture, Department of Chemistry, Memorial University of Newfoundland, St. John's, NL, Canada, July 13th, 2023.
- (438) "Crafting super molecules: Creativity is just connecting things" The Job Lecture (public lecture), Department of Chemistry, Memorial University of Newfoundland, St. John's, NL, Canada, July 12th, 2023.
- (437) "Synthesis of carbon nanorings and carbon nanobelts" The Job Lecture, Department of Chemistry, Memorial University of Newfoundland, St. John's, NL, Canada, July 12th, 2023.
- (436) "Molecular nanocarbon synthesis and beyond" The 39th Biennial Meeting of the Spanish Royal Society of Chemistry (plenary lecture), The Auditorium – Palacio de Congresos de Zaragoza, Zaragoza, Spain, July 27th, 2023.
- (435) "Toward molecular nanocarbon biology" The Kawagishi specially promoted research project meeting, The Ocean, Hamanako, Shizuoka, Japan, June 1st, 2023.
- (434) "Molecular nanocarbon synthesis and beyond" The Kickoff Symposium of SKCM<sup>2</sup> (Hiroshima Univ WPI), International Institute for Sustainability with Knotted Chiral Meta Matter (SKCM<sup>2</sup>), Hiroshima International Conference Center, Hiroshima, Japan, March 21st, 2023.
- (433) "Toward molecular nanocarbon biology" The Paul G. Gassman Lecture, Department of Chemistry, University of Minnesota, Minneapolis, Minnesota, USA, March 16th, 2023.
- (432) "Catalyst-enabled molecular nanocarbon synthesis" The Paul G. Gassman Lecture, Department of Chemistry, University of Minnesota, Minneapolis, Minnesota, USA, March 15th, 2023.
- (431) "Synthesis of carbon nanorings and carbon nanobelts" The Paul G. Gassman Lecture, Department of Chemistry, University of Minnesota, Minneapolis, Minnesota, USA, March 14th, 2023.
- (430) "Molecular nanocarbon science: Toward unexplored fields with unexplored molecules" Special Seminar, Tosoh Corporation, Nanyo, Yamaguchi, Japan, December 16th, 2022.
- (429) "Synthesis of carbon nanorings and carbon nanobelts" Frontiers of EOC: Organic Conjugated Materials (celebrating the 60th anniversary of institute of elemento-organic chemistry), Nankai University, China, November 16th, 2022 (online).
- (428) "Molecular nanocarbon science: From precise synthesis to nanocarbon biology" Special Seminar, Takeda Pharmaceutical Company Limited, November 6th, 2022 (online).



- (427) "Catalyst-enabled molecular nanocarbon synthesis and nanocarbon biology" The Reben Benjamin Sandin Lecture (Lecture 2), Department of Chemistry, University of Alberta, Edmonton, Alberta, Canada, November 1st, 2022.
- (426) "Synthesis of carbon nanorings and carbon nanobelts" The Reben Benjamin Sandin Lecture (Lecture 1), Department of Chemistry, University of Alberta, Edmonton, Alberta, Canada, October 31st, 2022.
- (425) "Toward super molecules: Virtue-creating synthetic chemistry and the power of interdisciplinary research" Japan Society of Physics and Chemistry Education (Tokai Block), Shin-Sakae, Nagoya, October 19th, 2022.
- (424) "Crafting super molecules: Unlimited possibility enabled by interdisciplinary approach" Nagoya University - Jilin University Online Program, Summer Lecture Series, August 4th, 2022 (online).
- (423) "Molecular nanocarbons: Exploring new fields with new molecules" The GTR Lecture, Nagoya University, July 20th, 2022 (online).
- (422) "Molecular nanocarbon synthesis and beyond" The 19th International Symposium on Novel Aromatic Compounds (ISNA19) (plenary lecture), University of Warsaw, Poland, July 6th, 2022.
- (421) "Molecular nanocarbons: Diverse structures, diversity-oriented synthesis, and diverse applications" The 2nd IRTG Joint Symposium (University of Münster and Nagoya University), Münster University, Germany, July 1st, 2022.
- (420) "Virtue-creating synthetic chemistry and the power of interdisciplinary research" The SSH Special Lecture, Meiwa High School, Nagoya, June 21st, 2022.
- (419) "Molecular nanocarbons: Diverse structures, diversity-oriented synthesis, and diverse applications" The 105th Canadian Chemistry Conference and Exhibition, "Diversity and Innovation in Chemistry" (plenary lecture), Calgary TELUS Convention Centre, Calgary, Alberta, Canada, June 17th, 2022.
- (418) "Molecular nanocarbon synthesis and beyond" The 241st ECS Meeting, Nano Chemistry in Japan, Vancouver Convention Center, June 3rd, 2022 (online).
- (417) "Molecular nanocarbons: From precise synthesis to nanocarbon biology" Special Seminar, Department of Chemistry, Indian Institute of Technology Kanpur, India, May 26th, 2022 (online).
- (416) "A decade of ITbM 1.0" The ITbM Workshop (ITbM 2.0 Kickoff Meeting), Nagoya University, May 16th, 2022.
- (415) "Creation of new molecular nanocarbons and applications to materials and biology" The Fine Chemicals Japan 2022 (plenary lecture), Tokyo Big Site, April 20th, 2022.
- (414) "Molecular nanocarbon synthesis and beyond" The ChemSoc (Chemical Society) Lecture, School of Chemistry, University of New South Wales (UNSW) Sydney, Australia, April 7th, 2022 (online).
- (413) "Molecular nanocarbons: From precise synthesis to nanocarbon biology" The 142nd Annual Meeting of the Pharmaceutical Society of Japan (plenary lecture), March 26th, 2022 (online).
- (412) "Toward making unique bioactive molecules" The Chemical Society Meeting, Symposium in Memory of Daisuke Uemura, March 23rd, 2022 (online).
- (411) "Virtue-creating synthetic chemistry and the power of interdisciplinary research" The SSH Special Lecture, Asahigaoka High School, Nagoya, March 14th, 2022.
- (410) "Molecular nanocarbon synthesis and beyond" PNU BK4/BRL International Symposium on Polymer Chemistry, Department of Chemistry, Pusan National University, Korea, March 4th, 2022 (online).
- (409) "Nanocarbon biology" JST Workshop on Life Science and Nanotechnology, January 20th, 2022 (online).
- (408) "Molecular nanocarbon science powered by synthetic chemistry" IRTG 2678 Block Course, Functional pi-Systems: Activation, Interaction, Application (IRTG 2678), Münster University, Germany, January 13th, 2022 (online).

- (407) "Creation of new forms of nanocarbons enabled by C-H activation" The International Chemical Congress of Pacific Basin Societies 2021 (Pacifichem 2021), Recent Advances in C-H Functionalization, December 18th, 2021 (online).
- (406) "Molecular nanocarbon synthesis and beyond" 2021 Materials Research Society - Taiwan International Conference (2021 MRSTIC), November 13-17th, 2021 (virtual conference).
- (405) "Virtue-creating synthetic chemistry and the power of interdisciplinary research" The 80th Anniversary of Toyota-Nishi High School (plenary lecture), November 6th, 2021.
- (404) "Synthesis of new molecular nanocarbons toward nanocarbon-initiated breeding" The 38th Annual Meeting of the Japanese Society for Plant Biotechnology (online), September 9th, 2021.
- (403) "Molecular nanocarbon science powered by synthetic chemistry" EPK Symposium (celebrating E. Peter Kündig's 75th birthday), University of Geneva (online), September 3rd, 2021.
- (402) "Making transformative molecules by interdisciplinary approach" Nagoya University Executive Training Program, Nagoya University, July 28th, 2021.
- (401) "Molecular nanocarbon science powered by synthetic chemistry" ETN CHAIR - C-H Activation for Industrial Renewal - Summer School (online), June 23rd, 2021.
- (400) "Molecular nanocarbon science powered by synthetic chemistry" The Toray Seminar (online), April 16th, 2021.
- (399) "Molecular nanocarbon science powered by synthetic chemistry" The Organic Chemistry and Chemical Biology Colloquium, Department of Chemistry, University of Oxford, UK (online), January 28th, 2021.
- (398) "Making new forms of carbon" The University of Tokyo WISE Program (online), January 20th, 2021.
- (397) "Crazy molecular nanocarbon science including biology" ITbM Workshop, Nagoya University (online), January 18th, 2021.
- (396) "Crafting super molecules: Unlimited possibility enabled by interdisciplinary approach" Chiba University Leading Graduate Program (online), November 27th, 2020.
- (395) "Crafting super molecules: Unlimited possibility enabled by interdisciplinary approach" The 111th Alumni Association of Nagoya University Medical School, Nagoya Kanko Hotel, November 7th, 2020.
- (394) "Precision synthesis of molecular nanocarbons" The 10th CSJ Chemistry Festa (online), October 22nd, 2020.
- (393) "Crafting super molecules: Unlimited possibility enabled by interdisciplinary approach" The 39th Kanazawa Kidney Seminar (online), October 10th, 2020.
- (392) "Exploring chronobiology by synthetic chemistry" Nagoya University GTR Retreat (online), September 25th, 2020.
- (391) "Making beautiful and crazy molecules" Ina Chemical Biology Seminar, Shinshu University (online), July 29th, 2020.
- (390) "Toward making beautiful and crazy molecules" Radiation-driven Biotechnology Seminar (online), June 11th, 2020.
- (389) "Toward making beautiful and crazy molecules" Chem-Station Virtual Symposium (online), May 1st, 2020.
- (388) "Creating new value enabled by interdisciplinary team" Central Japan Quality Control Association, Wink Aichi, Nagoya, February 6th, 2020.
- (387) "Making transformative molecules by interdisciplinary approach" Nagoya University Executive Training Program, Nagoya University, February 5th, 2020.
- (386) "Crafting super molecules: Unlimited possibility enabled by interdisciplinary approach" The Manager Forum, Nagoya Trade & Industry Center, Nagoya Castle Hotel, Nagoya, January 15th, 2020.

- (385) "Making new forms of nanocarbons" The 6th CSRS-ITbM Joint Workshop, Suzuki Umetaro Hall, RIKEN, Wako, Saitama, January 8th, 2020.
- (384) "Crafting super molecules: Unlimited possibility enabled by interdisciplinary approach" The Mitsubishi Chemicals Special Lecture, Mitsubishi Chemicals, Yokohama, December 9th, 2019.
- (383) "Crafting super molecules: Unlimited possibility enabled by interdisciplinary approach" The 130th Sci-tech Salon, Komaba Faculty House, The University of Tokyo, Komaba, Tokyo, October 6th, 2019.
- (382) "Crafting super molecules: Unlimited possibility enabled by interdisciplinary approach" The Academic Night (Kickoff Lecture), Nagoya Innovators Garage, Nadia Park, Sakae, Nagoya, September 26th, 2019.
- (381) "Making new forms of nanocarbons" The 75th CEMS Colloquium, Center for Emergent Matter Science (CEMS), RIKEN, Wako, Saitama, September 18th, 2019.
- (380) "Crafting super molecules: Unlimited possibility enabled by interdisciplinary approach" The Premium Lecture, Medical School, Nagoya University, September 5th, 2019.
- (379) "Combatting Striga: Return the pink field back to green by molecules and solve the food crisis in Africa" Africa-Japan Ministerial Dialogue Meeting on STI for SDGs, PACIFICO Yokohama, Yokohama, August 28th, 2019.
- (378) "Toward transformative bio-molecules" The 2nd Workshop on Tidal Power, Prime Central Tower, Nagoya, August 22nd, 2019.
- (377) "Making new forms of nanocarbons" The 18th International Symposium on Novel Aromatic Compounds (ISNA-18), Sapporo Convention Center, Hokkaido, July 22nd, 2019.
- (376) "Making new forms of nanocarbons" The 20th European Symposium in Organic Chemistry (ESOC), Vienna, Austria, July 15th, 2019.
- (375) "Creation of new forms of nanocarbons enabled by C-H activation" The 47th Naito Conference on C-H bond activation and transformation, CHÂTERAISÉ Gateaux Kingdom SAPPORO, Hokkaido, July 3rd, 2019.
- (374) "Crafting super molecules: Unlimited possibility enabled by interdisciplinary approach" The 62nd Annual Meeting of the Japanese Society of Nephrology, Nagoya Congress Center, Aichi, June 22nd, 2019.
- (373) "Changing the world with molecules: Creativity is just connecting things" The Special Lecture, Kariya Highschool, Aichi, June 12th, 2019.
- (372) "Changing the world with molecules: Creativity is just connecting things" The Special Lecture at the Global Leader Program, Gifu Highschool, Gifu, June 11th, 2019.
- (371) "Making new forms of carbon: Creativity is just connecting things" The 29th Banyu Fukuoka Symposium, Kyushu University, Fukuoka, May 25th, 2019.
- (370) "Crafting super molecules: Creativity is just connecting things" The Public Lecture at the 70th Anniversary of Gifu University, Gifu University Satellite Campus, Gifu, May 10th, 2019.
- (369) "Crafting super molecules: Creativity is just connecting things" The Chunichi Cultural Center, April 14th, 2019.
- (368) "Unlimited possibility of molecular nanocarbons" The 7th International Symposium on  $\pi$ -System Figuration, Osaka University, Osaka, March 29th, 2019.
- (367) "Toward making transformative molecules: Creativity is just connecting things" The 1st ICRéDD International Symposium, Hokkaido University, Sapporo, March 12th, 2019.
- (366) "Unlimited possibility of molecular nanocarbons" JST President Lecture, Tokyo, January 23, 2019.
- (365) "Synthetic chemistry meets plant biology and chronobiology" The 1st International Symposium on Chemical Communication (ISCC2019), "Frontier Research on Chemical Communications", Hitotsubashi Hall, National Center of Sciences Building, Tokyo, January 10th, 2019.

- (364) "Crafting super molecules: Unlimited possibility enabled by interdisciplinary approach" The 7th WPI Science Symposium, Nagoya University, December 27th, 2018.
- (363) "Synthetic chemistry meets plant biology and chronobiology" A\*STAR, Singapore, December 18th, 2018.
- (362) "Controlled synthesis of molecular nanocarbons" The 10th Singapore International Chemistry Conference (SICC10), Singapore, December 17th, 2018.
- (361) "Making new forms of nanocarbons" The Netherlands Scholar Award for Supramolecular Chemistry 2018, Rijksuniversiteit Groningen, The Netherlands, December 7th, 2018.
- (360) "Making new forms of nanocarbons" The Netherlands Scholar Award for Supramolecular Chemistry 2018, Radboud University Nijmegen, The Netherlands, December 6th, 2018.
- (359) "Making new forms of nanocarbons" The Netherlands Scholar Award for Supramolecular Chemistry 2018, Eindhoven University of Technology, The Netherlands, December 5th, 2018.
- (358) "Synthetic chemistry meets plant biology and chronobiology" CHAIN Conference 'Chemistry for the future - Chemistry for Life', Hotel NH Eindhoven Conference Center, The Netherlands, December 3rd, 2018.
- (357) "Precise synthesis of graphene nanoribbons by living APEX polymerization" The 27th Polymer Materials Forum, The Society of Polymer Science, Funabori, November 21st, 2018.
- (356) "Molecules that change world" The 5th HIRAI Pitch, Cabinet Office, Government of Japan, Tokyo, November 14th, 2018.
- (355) "Exploring plant and animal biology by synthetic chemistry" Nagasaki University Special Lecture, Nagasaki University, October 31st, 2018.
- (354) "Molecular nanocarbon science" Nagasaki University Special Lecture, Nagasaki University, October 30th, 2018.
- (353) "Crafting super molecules: Unlimited possibility enabled by interdisciplinary approach" The 15th Highschool Chemistry Grand Contest, Nagoya City University, October 28th, 2018.
- (352) "Creating powerful molecules" Kobe University Special Lecture, Kobe University, Hyogo, October 18th, 2018.
- (351) "Making new forms of nanocarbons" 2018 International Institute for Nanotechnology Symposium, Hilton Orrington Hotel, Evanston, IL, USA, September 27th, 2018.
- (350) "Exploring molecular nanocarbon science" The Third International Symposium on the Synthesis and Application of Curved Organic  $\pi$ -Molecules & Materials (CURO- $\pi^3$ ), Oxford University, UK, September 5-7th, 2018.
- (349) "Molecular chronobiology enabled by synthetic chemistry" The 13th Annual Meeting of Japanese Society for Chemical Biology, M&D Tower, Tokyo Medical and Dental University, Tokyo, June 13th, 2018
- (348) "Exploring molecular nanocarbon science" The Fusion Conference: The 2nd From Carbon-Rich Molecules to Carbon-Based Materials Conference, Nassau, Bahamas, June 7-10th, 2018.
- (347) "Toward making molecules for future" NHK Cultural Center, NHK Nagoya Center, May 23rd, 2018.
- (346) "Change the world with molecules" Kansai Tachibanakai, Kyoto University, May 12th, 2018.
- (345) "Exploring molecular nanocarbon science" The Guthikonda Lecture, Department of Chemistry, Stanford University, April 25th, 2018.
- (344) "Exploring molecular nanocarbon science" The Rowland Pettit Centennial Visiting Professorship, Department of Chemistry, The University of Texas at Austin, April 20th, 2018.
- (343) "Recent progress of the Institute of Transformative Bio-Molecules" The Ariyama Symposium, The Noyori Conference Hall, Nagoya University, March 27th, 2018.
- (342) "Making a new form of carbon" The 3rd FoS Club Meeting, The Noyori Conference Hall, Nagoya University, March 24th, 2018.

- (341) "Synthesis, properties and applications of molecular nanocarbons" The CSJ Award for Creative Work (Chemical Society of Japan), The 98th Annual Meeting of the Chemical Society of Japan, Nippon University, Funabashi, March 21st, 2018.
- (340) "Exploring molecular nanocarbon science" The 54th Fullerenes-Nanotubes-Graphenes General Symposium, The University of Tokyo, March 12th, 2018.
- (339) "Food innovation (what are new crops?)" Nobel Prize Dialogue Tokyo 2018, Pacifico Yokohama, Yokohama, March 11th, 2018.
- (338) "Exploring molecular nanocarbon science" JSPS Core-to-Core Joint Symposium, University of Münster, Münster, Germany, February 2nd, 2018.
- (337) "Exploring molecular nanocarbon science" Jan-Erling Bäckvall 70th Anniversary Symposium, The Royal Swedish Academy of Sciences, Stockholm, Sweden, January 24th, 2018.
- (336) "Exploring molecular nanocarbon science" CEMS International Symposium on Supramolecular Chemistry and Functional Materials 2018, Ito International Research Center, The University of Tokyo, Tokyo, January 9-10th, 2018.
- (335) "Recent progress in molecular nanocarbon science" Tokai Conference in Shizuoka 2017, B-nest Shizuoka City Industry-University Exchange Center, Shizuoka, December 9th, 2017.
- (334) "Making game-changing molecules" Nagoya University Alumni Meeting, Nagoya University, December 5th, 2017.
- (333) "Exploring molecular nanocarbon science" ACS on Campus, Nagoya University, November 29th, 2017.
- (332) "Molecular nanocarbon science enabled by catalysis" Annual Academic Committee Meeting, State Key Lab of Organometallic Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai, November 24th, 2017.
- (331) "Molecular nanocarbon science with carbon nanobelts, tubes, ribbons and saddles" The 5th International Symposium on Transformative Bio-Molecules (ISTbM-5), Institute of Transformative Bio-Molecules, Nagoya University, November 20-21st, 2017.
- (330) "Molecular nanocarbon science enabled by catalysis" Synthetic Organic Chemistry Workshop, The Society of Synthetic Organic Chemistry, Nagai Memorial Hall, Shibuya, November 15th, 2017.
- (329) "Changing the world with molecules" Jishukan Highschool, Aichi, October 27th, 2017.
- (328) "Changing the world with molecules" Handa Highschool, Handa, Aichi, October 26th, 2017.
- (327) "Changing the world with molecules" Takamatsu Daiichi Highschool, Takamatsu, October 25th, 2017.
- (326) "Making a new form of carbon: recent progress in molecular nanocarbon science" The 7th Chemistry Festa, The Chemical Society of Japan, Tower Hall Funabashi, October 17th, 2017.
- (325) "Synthesis of game-changing molecules at the interface of synthetic chemistry, nanocarbon science and life science" The Japan Neurosurgical Society Meeting, Nagoya Congress Center, Nagoya, October 13th, 2017.
- (324) "Synthesis of game-changing molecules at the interface of synthetic chemistry, nanocarbon science and life science" Toyota Technological Institute, Aichi, September 5th, 2017.
- (323) "Recent progress in molecular nanocarbon science" The 10th ChemBio Hybrid Lecture, Department of Chemistry & Biotechnology, The University of Tokyo, Takeda Hall, Tokyo, September 30th, 2017.
- (322) "Making the impossible possible by molecules" ITbM Consortium Workshop, Nagoya University, September 29th, 2017.
- (321) "Making structurally uniform nanocarbons and a new form of carbon" The 1st International Symposium on Catalysis for Sustainable Chemical Synthesis, Joint Symposium of FRAIS/Nagoya IAR, Albert-Ludwigs-Universität Freiburg, Freiburg, Germany, September 25th, 2017.

- (320) "C-H activation meets plant biology and chronobiology" The ICI Distinguished Lecturer 2017, Department of Chemistry, University of Calgary, Canada, September 22nd, 2017.
- (319) "Making structurally uniform nanocarbons and a new form of carbon" The ICI Distinguished Lecturer 2017, Department of Chemistry, University of Calgary, Canada, September 20th, 2017.
- (318) "Making structurally uniform nanocarbons and a new form of carbon" The Angewandte Chemie Symposium at 150th Anniversary of the Gesellschaft Deutscher Chemiker (GDCh), September 11th, 2017.
- (317) "Synthetic chemistry meets plant biology and chronobiology" Universities of Freiburg-Strasbourg-Nagoya Interdisciplinary and International Summer School, Nagoya University, September 1, 2017.
- (316) "Making game-changing molecules" Asahi Kids Newspaper Forum, Nagoya University, August 26th, 2017.
- (315) "Merging synthetic chemistry, plant biology and animal biology" Mini-symposium of Scientific Research on Innovative Areas "Determining Principles in the Birth of New Plant Species", Nagoya University, August 22nd, 2017.
- (314) "Synthesis of game-changing molecules" Yomiuri Techno Forum Gold Medal Lecture, Yomiuri Shimbun Osaka Building, Osaka, August 5th, 2017.
- (313) "Molecular nanocarbon science enabled by rapid synthesis catalysts" Summer School of Coordination Chemistry, Nishiura Onsen, Aichi, August 2nd, 2017.
- (312) "Merging synthetic chemistry, plant biology and animal biology" IoC-IPMB-ITbM Joint Symposium on New Frontiers by Fusing Chemistry and Biology, Ta-shue Chou Memorial Hall, Institute of Chemistry, Academia Sinica, Taiwan, July 13-14th, 2017.
- (311) "Changing the world with molecules" Special Lecture for Nambu Junior Highschool, Nagoya University, July 10th, 2017.
- (310) "Carbon nanorings, belts, ribbons and saddles" The 12th International Symposium on Macrocyclic and Supramolecular Chemistry (ISMSC), Royal Society of Chemistry, Cambridge, UK, July 2-6th, 2017.
- (309) "Creation of molecular nanocarbons by metal catalysis" The 19th IUPAC International Symposium on Organometallic Chemistry Directed Towards Organic Synthesis (OMCOS-19), Jeju Convention Center, Korea, June 25-29th, 2017.
- (308) "Changing the world with molecules" Kanuma Highschool, Kanuma, Tochigi, June 19th, 2017.
- (307) "Synthesis of game-changing molecules at the interface of synthetic chemistry, nanocarbon science and life science" Sumitomo Dainippon Pharma, June 14th, 2017.
- (306) "Synthesis of game-changing molecules at the interface of synthetic chemistry, nanocarbon science and life science" Nippon Soda Co., Odawara, June 12th, 2017.
- (305) "Synthesis of game-changing molecules" Yomiuri Techno Forum Gold Medal Lecture, Japan Press Center, Tokyo, May 20th, 2017.
- (304) "Synthesis of game-changing molecules" Special Lecture, Gifu University, Gifu, May 15th, 2017.
- (303) "Making structurally uniform nanocarbons and a new form of carbon" Institute of Organic Chemistry and Biochemistry, Academy of Sciences of the Czech Republic, Prague, April 26th, 2017.
- (302) "Making structurally uniform nanocarbons and a new form of carbon" Institute of Organic Chemistry, Polish Academy of Sciences, Warsaw, Poland, April 24th, 2017.
- (301) "Exploring the power of molecules by rapid synthesis catalysts" University of California, Davis, April 21st, 2017.
- (300) "Exploring the power of molecules by rapid synthesis catalysts" Bristol-Myers Seminar, University of California, Berkeley, April 18th, 2017.
- (299) "Exploring the power of molecules by interdisciplinary research" Special Lecture for Freshman, Nagoya University, April 11th, 2017.

- (298) "Exploring molecular nanocarbon science by rapid synthesis catalysts" Hiratsuka Symposium, Kanagawa University, Hiratsuka, March 4th, 2017.
- (297) "Making game-changing molecules" Kyowa Kirin, Shizuoka, February 20th, 2017.
- (296) "Making game-changing molecules" Taisho Pharmaceutical, Saitama, February 6th, 2017.
- (295) "CPP and related carbon nanorings" Fuji Film S-Seminar, Center of Synthetic Organic Chemistry, Fuji Film, Kanagawa, January 17-18th, 2017.
- (294) "C-H coupling catalysts" Fuji Film S-Seminar, Center of Synthetic Organic Chemistry, Fuji Film, Kanagawa, January 17-18th, 2017.
- (293) "Making game-changing molecules" Fuji Film S-Seminar, Center of Synthetic Organic Chemistry, Fuji Film, Kanagawa, January 17-18th, 2017.
- (292) "Making game-changing molecules" WPI Open Lecture, Ministry of Education, Culture, Sports, Science, and Technology, Japan, December 17th, 2016.
- (291) "Exploring the power of molecules by rapid synthesis catalysts" Memorial Symposium on 25 Years of Banyu Symposia, The University of Tokyo, December 3rd, 2016.
- (290) "Synthetic chemistry meets plant biology and chronobiology" The 39th Annual Meeting of The Molecular Biology Society of Japan, Pacifico Yokohama, Kanagawa, November 30th – December 2nd, 2016.
- (289) "Rapid synthesis catalysts meet plant biology and chronobiology" Cold Spring Harbor Asia Conference: Latest Advances in Plant Development and Environmental Response, Awaji Yumebutai International Conference Center, Hyogo, November 29th – December 2nd, 2016.
- (288) "Functional molecules by rapid synthesis catalysts" The 1st ITbM-IoC Joint Workshop, Nagoya University, November 15-17th, 2016.
- (287) "Generation of nanocarbon molecules and biofunctional molecules by rapid synthesis catalysts" The JSPS 116 Committee Symposium on Functional Chemistry, Sakata-Hirata Hall, Nagoya University, November 15-17th, 2016.
- (286) "Synthetic chemistry meets plant biology and chronobiology" Japanese Society for Chronobiology, Nagoya University, Nagoya, November 12th, 2016.
- (285) "Making game-changing molecules" Tosoh Tokyo Research Center, Ayase, Kanagawa, November 7th, 2016.
- (284) "Exploring nanocarbon materials and plant biology by C-H activation" The Holger Erdtman Lecture, KTH, Sweden, October 31st, 2016.
- (283) "Exploring molecular nanocarbon science by rapid synthesis catalysts" Molecular Architectonics Meeting, Chikushi Hall, Chikushi Campus, Kyushu University, October 20-21st, 2016.
- (282) "The power of molecules" Organic Materials Research Center, Toyota Motor Corporation, Toyoda, September 30th, 2016.
- (281) "Exploring molecular nanocarbon science and new biofunctional molecules by rapid synthesis catalysts" Department of Chemistry, Graduate School of Science, Hokkaido University, September 27th, 2016.
- (280) "The power of molecules" The Nagase Prize, Toshin Frontier Sallon Science Seminar, Imperial Hotel Tokyo, Tokyo, September 23rd, 2016.
- (279) "APEX: A new way to rapidly synthesize nanographenes and a new form of carbon" The 2nd International Symposium on the Synthesis and Application of Curved Organic  $\pi$ -Molecules and Materials (CURO- $\pi$ ), University of Oregon, Eugene, Oregon, USA, September 12-14th, 2016.
- (278) "Exploring nanocarbon materials and plant biology by C-H activation" University of Nevada Seminar, Department of Chemistry, University of Nevada, Reno, USA, September 9th, 2016.
- (277) "Exploring nanocarbon materials and plant biology by C-H activation" Treat B. Johnson Lecture, Department of Chemistry, Yale University, USA, September 7th, 2016.

- (276) "Exploring molecular nanocarbon science enabled by rapid synthesis catalysts" Sumitomo Chemical, Advanced Materials Development Laboratory, Tsukuba, August 24th, 2016.
- (275) "Generation of new biofunctional molecules and nanocarbon molecules by rapid synthesis catalysts" Chugai Pharmaceutical Co. Ltd., Kamakura Research Center, Kanagawa, August 2nd, 2016.
- (274) "Generation of nanocarbon molecules and biofunctional molecules by rapid synthesis catalysts" Department of Chemistry, Tohoku University, Sendai, August 1st, 2016
- (273) "Creation of biofunctional molecules and nanocarbon molecules by rapid synthesis catalysts" Summer Symposium of the Japan Society for Process Chemistry, Nagoya Congress Center, Nagoya, July 28-29th, 2016.
- (272) "Making game-changing molecules" Science Colloquium, Graduate School of Science, Nagoya University, Nagoya, July 22nd, 2016.
- (271) "Creation of molecular nanocarbons by C-H functionalization" The 3rd EOC Symposium, Nankai University, Tianjin, China, July 15-17th, 2016.
- (270) "Creating game-changing molecules through merging synthetic chemistry, plant biology and chronobiology" Medicinal Chemistry Seminar, Yatsugatake Royal Hotel, Yamanashi, July 13-15th, 2016.
- (269) "Generation of new biofunctional molecules and nanocarbon molecules by rapid synthesis catalysts" Central Pharmaceutical Research Institute, Japan Tobacco Inc., Takatsuki, Osaka, July 4th, 2016.
- (268) "Plant and animal biology accelerated by C-H activation catalysts" Medicinal Chemistry Meeting, XIV Tateshina, Nagano, June 30th – July 1st, 2016.
- (267) "APEX: A new way to rapidly synthesize nanographenes and a new form of carbon" 2016 Japan-USA Seminar on Polymer Synthesis: Polymer Synthesis for a Sustainable Future, Hilton Niseko Village, Niseko, Hokkaido, June 24-28th, 2016.
- (266) "Accelerated discovery of functional molecules by C-H functionalization" The 1st CCHF-ITbM-IBS Joint Workshop on C-H Functionalization, Nagoya University, June 16-17th, 2016.
- (265) "The power of synthetic chemistry: Providing 'solutions' by molecules" Opening Ceremony of Integrated Research Consortium on Chemical Sciences, Nagoya University, June 22nd, 2016.
- (264) "C-H activation exploring nanocarbon materials and plant biology" College of Chemistry & Materials Science, Northwest University, Xi'an, China, June 15th, 2016.
- (263) "C-H activation exploring nanocarbon materials and plant biology" Frontier Institute of Science and Technology, Xi'an Jiaotong University, Xi'an, China, June 14th, 2016.
- (262) "C-H activation exploring nanocarbon materials and plant biology" School of Chemistry & Chemical Engineering, Shaanxi Normal University, Xi'an, China, June 13th, 2016.
- (261) "Exploring the power of molecules by interdisciplinary research" ITbM Lecture to High School Students, Nagoya University, Nagoya, May 28th, 2016.
- (260) "The power of synthetic chemistry" JCI Symposium 2016, Japan Chemical Industry Association, Palace Hotel Tokyo, Tokyo, May 26th, 2016.
- (259) "Toward transformative molecules" Yomiuri Science-Technology Forum, Yomiuri Shimbun, Tokyo, May 25th, 2016.
- (258) "Exploring molecular nanocarbon science by rapid synthesis catalysts" Tosoh Corporation, Nanyo Center, Yamaguchi, May 20th, 2016.
- (257) "Creation of new biofunctional molecules by rapid synthesis catalysts" The 25th French-Japanese Symposium on Medicinal and Fine Chemistry, Keio Plaza Hotel Tama, Tama, Tokyo, May 15-18th, 2016.



- (256) "Be unique" G7 Science and Technology Symposium, International Congress Center, Tsukuba, May 15th, 2016.
- (255) "C-H activation exploring nanocarbon materials and plant biology" The 7th SFB Symposium in Münster, University of Münster, Germany, April 22nd, 2016.
- (254) "The power of C-H activation in plant biology" Syngenta Research Center, Stein, Switzerland, April 21st, 2016.
- (253) "Generation of new biofunctional molecules and nanocarbon molecules by rapid synthesis catalysts" Taoka Chemicals, Osaka, April 15th, 2016.
- (252) "Generation of new biofunctional molecules and nanocarbon molecules by rapid synthesis catalysts" Organic and Medicinal Chemistry Seminar, Tsukuba University, Tsukuba, April 13th, 2016.
- (251) "Rapid synthesis catalysts meet plant biology and chronobiology" IIS Seminar, International Institute for Integrative Sleep Science, Tsukuba University, Tsukuba, April 13th, 2016.
- (250) "The power of molecules" Institute for Advanced Research, Nagoya University, April 12th, 2016.
- (249) "Creation of biofunctional molecules and nanocarbon molecules by rapid synthesis catalysts" ICIQ Lecture, Institute of Chemical Research of Catalonia, Tarragona, Spain, April 7th, 2016.
- (248) "Generation of new bio-functional molecules and molecular nanocarbons by C-H activation" The 16th Bristol Synthesis Meeting, University of Bristol, Bristol, UK, April 5th, 2016.
- (247) "Single-molecule carbon nanotubes, nanoribbons, and a new form of carbon" Japan-US Joint Symposium "Nanocarbon Minisymposium in Honor of ACS President Donna Nelson" The 96th Chemical Society of Japan Annual Meeting, Doshisha University, Kyoto, March 26th, 2016.
- (246) "Creation of biofunctional molecules and nanocarbon molecules by rapid synthesis catalysts" The Ta-shue Chou Lectureship Award Symposium, Institute of Chemistry, Academia Sinica, Taiwan, March 18th, 2016.
- (245) "Creation of biofunctional molecules and nanocarbon molecules by rapid synthesis catalysts" National Chiao-Tung University, Hsinchu, Taiwan, March 16th, 2016.
- (244) "Synthesis of molecular nanocarbons powered by catalysis" Department of Chemistry, National Cheng Kung University, Tainan, Taiwan, March 15th, 2016.
- (243) "Single-molecule carbon nanotubes, nanoribbons, and a new form of carbon" MANA International Symposium 2016, Tsukuba International Congress Center, March 9th, 2016.
- (242) "New biofunctional molecules by rapid synthesis catalysts" The Symposium on Chemical Biology of Natural Products, Kyoto University, Kyoto, February 23rd, 2016.
- (241) "Single-molecule carbon nanotube, nanoribbon, and a new form of carbon" AIMR International Symposium 2016, Advanced Institute for Materials Science, Tohoku University, Sendai, February 21-24th, 2016.
- (240) "Single-molecule carbon nanotubes, nanoribbons, and a new form of carbon" The 5th International Conference on MEXT Project of Integrated Research on Chemical Synthesis, Nagoya University, January 30th, 2016.
- (239) "Creation of new carbon materials by C-H functionalization" The 3rd CCHF Virtual Symposium on C-H Functionalization, NSF Center for Selective C-H Functionalization, January 19th, 2016.
- (238) "Exploring biofunctional molecules and nanocarbon molecules by rapid synthesis catalysts" IMS Colloquium, Institute for Molecular Science, Okazaki, Aichi, January 15th, 2016.
- (237) "Exploring biofunctional molecules and nanocarbon molecules by rapid synthesis catalysts" Frontier Seminar, Hotel New Otani Tokyo, January 7th, 2016.
- (236) "Exciting progress of ITbM" The 2nd CSRS-ITbM Joint Workshop, RIKEN, Wako, January 7th, 2016.

- (235) "Materials- and biology-oriented C-H activation" Pacificchem Symposium on C-H Functionalization, Hawaii, USA, December 15-20th, 2015.
- (234) "Synthesis of 1D, 2D, 3D molecular nanocarbons" Pacificchem Symposium on Chemistry of Nanocarbons, Hawaii, USA, December 15-20th, 2015.
- (233) "Showing the power of molecules by interdisciplinary research" ITbM Lecture to High School Students, Nagoya University, Nagoya, December 12th, 2015.
- (232) "Maximizing the power of molecules by interdisciplinary research" SSH Special Lecture, Handa High School, Aichi, Japan, December 5th, 2015.
- (231) "Single-molecule carbon nanotubes, nanoribbons, and a new form of carbon" R. C. Fuson Visiting Professor Lecture, University of Illinois at Urbana-Champaign, Illinois, USA, November 16th, 2015.
- (230) "Synthesis and discovery of bio-functional molecules by C-H activation" R. C. Fuson Visiting Professor Lecture, University of Illinois at Urbana-Champaign, Illinois, USA, November 16th, 2015.
- (229) "Catalyst-enabling plant/animal biology and nanocarbon science" Special Lecture of Ajinomoto Institute for Innovation, Kawasaki, Kanagawa, October 22nd, 2015.
- (228) "Rapid discovery of functional molecules by C-H activation" The 5th Chemistry Festa, Tower Hall Funabashi, Tokyo, October 13th, 2015
- (227) "Synthesis of 1D, 2D, 3D molecular nanocarbons" The 3rd Erlangen Symposium on Synthetic Carbon Allotropes, Universität Erlangen-Nürnberg, Erlangen, Germany, October 4-7th, 2015.
- (226) "Making transformative bio-molecules by chemistry-biology Mix-Lab" Opening Lecture at Aichi Science Festival, Nagoya University, September 19th, 2015.
- (225) "Synthesis and discovery of bio-functional molecules by C-H activation" Kumial Chemical Special Lecture, Kakegawa, Shizuoka, September 11th, 2015.
- (224) "Power of molecules: Merging synthetic chemistry and plant/animal biology" Kumial Chemical Special Lecture, Kakegawa, Shizuoka, September 11th, 2015.
- (223) "Mix is the key! Maximizing the power of molecules by interdisciplinary research" Seminar of Interactive Materials Science Cadet Program, Osaka University, Shiga, August 30th, 2015.
- (222) "Power of molecules: Merging synthetic chemistry, biology, and materials science" The Chemistry Grand Prix Special Lecture, Nagoya University, August 22nd, 2015.
- (221) "Catalyst-enabling nanocarbon science & plant/animal biology" The Arthur C. Cope Scholar Award, Boston Convention & Exhibition Center, Boston, USA, August 18th, 2015.
- (220) "Single-molecule carbon nanotubes, nanoribbons, and a new form of carbon" CREATE Symposium on Chirality, Queen's University, Kingston, Canada, August 13-14th, 2015.
- (219) "Materials- and biology-oriented C-H activation" The 62nd Gordon Research Conference on Organic Reactions and Processes, Bates College, Maine, USA, July 19-24th, 2015.
- (218) "Synthesis of 1D, 2D, 3D molecular nanocarbons" The 16th International Symposium on Novel Aromatic Compounds (ISNA-16), Madrid, Spain, July 5- 9th, 2015.
- (217) "Materials- and biology-oriented C-H activation" National Organic Chemistry Symposium (NOS), University of Maryland, June 28th – July 2nd, 2015.
- (216) "Mix is the key! Maximizing the power of molecules by interdisciplinary research" Synthetic Organic Chemistry Seminar, Mie, Japan, June 19-20th, 2015.
- (215) "Power of molecules: Merging synthetic chemistry, biology, and materials science" Super Science Special Lecture, Okazaki High School, Okazaki, Aichi, June 15th, 2015.
- (214) "Catalysis for carbon materials and plant/animal biology" Gifu Pharmaceutical University, Gifu, Japan, June 12th, 2015.
- (213) "Catalysis for carbon materials and plant/animal biology" Organoelement Chemistry Seminar, Kyoto University, Uji, Japan, June 8th, 2015.

- (212) "Materials- and biology-oriented C-H activation" RSC Organic Chemistry Symposium, Kyoto, Japan, June 5th, 2015.
- (211) "Showing the power of molecules by interdisciplinary research" ITbM Lecture to High School Students, Nagoya University, Nagoya, May 30th, 2015.
- (210) "C-H activation catalysis for plant/animal biology and nanocarbon science" Ono Pharmaceutical, Minase, Osaka, May 15th, 2015.
- (209) "Catalysis for carbon materials and plant/animal biology" Okayama University, Okayama, Japan, May 13th, 2015.
- (208) "Catalysis for carbon materials and plant/animal biology" Chiba University, Chiba, Japan, May 8th, 2015.
- (207) "Nanocarbon science and plant/animal biology Enabled by Molecule-Connecting Catalysts" Seminar of Kyoto University Kokakai, Shinagawa, Japan, April 24th, 2015.
- (206) "C-H activation catalysis for carbon materials and plant/animal biology" The Swiss Chemical Society Lectureship, Université de Geneve, Switzerland, April 17th, 2015.
- (205) "C-H activation catalysis for carbon materials and plant/animal biology" The Swiss Chemical Society Lectureship, Ecole Polytechnique Fédérale de Lausanne, Switzerland, April 16th, 2015.
- (204) "C-H activation catalysis for carbon materials and plant/animal biology" The Swiss Chemical Society Lectureship, Universität Bern, Switzerland, April 15th, 2015.
- (203) "C-H activation catalysis for carbon materials and plant/animal biology" The Swiss Chemical Society Lectureship, Universität Basel, Switzerland, April 14th, 2015.
- (202) "C-H activation catalysis for carbon materials and plant/animal biology" The Swiss Chemical Society Lectureship, Université de Neuchâtel, Switzerland, April 13th, 2015.
- (201) "Materials- and biology-oriented C-H activation" ETH Zurich, Switzerland, April 10th, 2015.
- (200) "Catalysis for carbon materials and plant/animal biology" Princeton University, April 7th, 2015.
- (199) "Catalysis for carbon materials and plant/animal biology" Harvard University, April 6th, 2015.
- (198) "Catalysis for carbon materials and plant/animal biology" The MBLA 10th Anniversary Symposium, Funabashi, Chiba, March 29th, 2015.
- (197) "C-H activation for plant/animal biology and carbon materials" Wuhan University, Wuhan, China, March 18th, 2015.
- (196) "C-H activation catalysts accelerating plant/animal biology and materials science" Takeda Pharmaceutical, Osaka, Japan, March 11th, 2015.
- (195) "Catalysis for carbon materials and plant/animal biology" Department of Chemistry, Seoul National University, Korea, February 3rd, 2015.
- (194) "Catalysis for carbon materials and plant/animal biology" 2015 IBS-KAIST&ITbM Joint Symposium, KAIST, Korea, February 2,nd 2015.
- (193) "A new journey with ITbM" The 1st CSRS-ITbM Joint Workshop, Nagoya University, Nagoya, January 7th, 2015.
- (192) "C-H activation catalysts for plant/animal biology and nanocarbon science" The 5th Symposium of Integrated Research on Chemical Synthesis, Nagoya University, Nagoya, December 19th, 2014.
- (191) "Catalysis for carbon materials and plant/animal biology" Department of Chemistry, Graduate School of Science, The University of Tokyo, Japan, December 11-12th, 2014.
- (190) "Catalysis for materials science and advanced biology" University of Shizuoka, Shizuoka, December 5th, 2014.
- (189) "A new journey with ITbM" University of Shizuoka, Shizuoka, December 5th, 2014.
- (188) "Catalysis for carbon materials and plant/animal biology" The 18th IRTG Joint Symposium and Core-to-Core Seminar, Munster, November 27-29th, 2014.

- (187) "The power of molecules and making molecules" SSH Lecture, Suwa Seiryō High School, Nagano, November 22nd, 2014.
- (186) "Exploring nanocarbon materials science and advanced biology by C-H functionalization" The Murai Symposium, Nara, October 30-31st, 2014.
- (185) "Catalyst-enabling molecular nanocarbon chemistry" International Symposium on the Synthesis and Application of Curved Organic  $\pi$ -Molecules and Materials, Uji, Kyoto, October 19-21st, 2014.
- (184) "Future materials science" The 11th Science and Technology in Society Forum (STS forum), Kyoto, October 5-7th, 2014.
- (183) "Toward molecular nanocarbon science" The Fusion Conference "From Carbon-Rich Molecules to Carbon-Based Materials, Mazagan Beach Resort, Morocco, September 22-25th, 2014.
- (182) "Catalysis for materials science and advanced biology" The Otsuka Symposium, September 16-17th, 2014.
- (181) "Toward molecular nanocarbon science" The 4th Young Researcher Meeting of Fullerene-Nanotube-Graphene Society, Nagoya, September 2nd, 2014.
- (180) "C-H coupling for synthetic bio-molecules and nanocarbons" Astellas Pharma Inc., Ibaraki, Japan, June 17th, 2014.
- (179) "C-H coupling for advanced biology and materials" The 3rd Frontier Chemistry Center International Symposium, Hokkaido University, Sapporo, Japan, June 13-14th, 2014.
- (178) "C-H coupling: An emerging tool for discovering synthetic bio-molecules" The International Symposium on Chemical Biology of Natural Products: Target ID and Regulation of Bioactivity, Nagoya, Japan, May 28-29th, 2014.
- (177) "C-H coupling catalysts: Enabling tools for advanced biology and materials" The IGER International Symposium on Chemical Science in Asia: Facilitating Singapore-Japan Scientific Interchange, Nagoya, Japan, May 26-28th, 2014.
- (176) "Catalysis and C-H activation for advanced biology and materials science" The 49th EUCHEM Conference on Stereochemistry "Bürgenstock Conference", Seehotel Waldstätterhof Brunnen, Brunnen, Switzerland, May 4-9th, 2014.
- (175) "C-H coupling for synthetic bio-molecules and nanocarbons" Wuhan University Special Lecture, Wuhan University, Wuhan, China, April 21st, 2014.
- (174) "Catalyst-enabling chemistry toward transformative molecules" Nankai University Lectureship on Organic Chemistry, Nankai University, Tianjin, China, April 18th, 2014.
- (173) "Toward molecular nanocarbon science" The 94th Annual Meeting of the Chemistry Society of Japan, Nagoya, Japan, March 30th, 2014.
- (172) "Catalyst-enabling chemistry toward transformative molecules" Aldrich Lecture, Emory University, Atlanta, USA, March 22nd, 2014.
- (171) "C-H coupling for synthetic bio-molecules and nanocarbons" Advances in C-H Functionalization, The 247th ACS National Meeting, Dallas, Texas, USA, March 16-20th, 2014.
- (170) "ITbM: A merger of synthetic chemistry, plant/animal biology, and theoretical chemistry" The Ariyama Symposium, Nagoya University, Japan, March 11th, 2014
- (169) "A journey toward transformative molecules: Creating value by synthetic chemistry" SSH Special Lecture, Handa Space Science Museum, Aichi, Japan, February 8th, 2014.
- (168) "Synthetic chemistry: Connect molecules, create values" The Cutting-Edge Academic Forum, Chubu University, Nagoya, Japan, January 29th, 2014.
- (167) "Toward molecular nanocarbon science" The Japanese Research Association for Organic Electronics Materials, Shinjuku, Japan, January 23rd, 2014
- (166) "Catalyst-enabling chemistry toward transformative molecules" Novartis Chemistry Lecture, Boston College, USA, January 15th, 2014.

- (165) "Catalyst-enabling chemistry toward transformative molecules" Novartis Chemistry Lecture, Novartis Cambridge, USA, January 14th, 2014.
- (164) "Catalyst-enabling chemistry toward transformative molecules" Novartis Chemistry Lecture, Harvard University, USA, January 13th, 2014.
- (163) "Catalyst-enabling chemistry toward transformative molecules" Novartis Chemistry Lecture, Novartis Emeryville, USA, January 10th, 2014.
- (162) "Catalyst-enabling chemistry toward transformative molecules" Novartis Chemistry Lecture, GNF, USA, January 8th, 2014.
- (161) "Catalyst-enabling chemistry toward transformative molecules" Novartis Chemistry Lecture, The Scripps Research Institute, USA, January 7th, 2014.
- (160) "Toward innovative material ITAMIN" The 3rd WPI Joint Symposium, Sendai, Japan, December 14th, 2013.
- (159) "Catalyst-enabling chemistry toward transformative molecules" International Symposium on Catalysis and Fine Chemicals 2013, Keynote Lecture, Renmin University, Beijing, China, December 2nd, 2013.
- (158) "Catalyst-enabling chemistry toward transformative molecules" Cambridge Catalysis Symposium, University of Cambridge, UK, November 22nd, 2013.
- (157) "Catalyst-enabling chemistry toward transformative molecules" Novartis Chemistry Lecture, Horsham, UK, November 21st, 2013.
- (156) "Catalyst-enabling chemistry toward transformative molecules" Novartis Chemistry Lecture, Basel, Switzerland, November 20th, 2013.
- (155) "A journey toward transformative molecules: Creating value by synthetic chemistry" Academic Lecture, Nagoya University Homecoming Day, Japan, October 19th, 2013.
- (154) "Controlled bottom-up synthesis of molecular nanocarbons" UK-Japan Workshop on Organic-Inorganic Framework Materials, Kyoto University iCeMS, Kyoto, Japan, October 10-11th, 2013.
- (153) "A journey toward transformative molecules: New challenges in ITbM" Special Lecture, RIKEN Center for Sustainable Resource Science Symposium, Iino Conference Center, Tokyo, Japan, October 10th, 2013.
- (152) "Catalyst-enabling chemistry toward transformative molecules" JCO-2013 Symposium (Plenary Lecture), French Chemical Society, Paris, France, September 24-26th, 2013.
- (151) "Catalyst-enabling chemistry toward transformative molecules" Mukaiyama Award, The 30th Synthetic Organic Chemistry Seminar, Kurashiki, Okayama, Japan, September 18-19th, 2013.
- (150) "Catalysis and synthesis for transformative molecules" ACP Award Lecture, Shanghai Institute of Organic Chemistry, China, September 2nd, 2013.
- (149) "Catalysis and synthesis for transformative molecules" ACP Award Lecture, Wuhan University, China, August 30th, 2013.
- (148) "Toward transformative arene-assembled molecules" Asian Rising Star Award Lecture, The 15th Asian Chemical Congress, Resorts World Sentosa Convention Centre, Singapore, August 20th, 2013.
- (147) "A journey toward transformative molecules: Breakthrough in arene-assembling chemistry" Special Lecture, Department of Chemistry, Faculty of Science, Kanagawa University, Japan, July 26th, 2013.
- (146) "Organic synthesis: Connect molecules, create values" Aichi Science and Mathematics Education Promotion Project "Seminar for the pursuit of knowledge", Aichi Prefecture Education Center, Japan, July 25th, 2013.
- (145) "A journey toward transformative molecules: Breakthrough in arene-assembling chemistry" I<sup>2</sup>CNER Seminar, WPI-I<sup>2</sup>CNER, Kyushu University, Japan, July 19th, 2013.

- (144) "A journey toward transformative molecules: Breakthrough in arene-assembling chemistry" Invited Lecture, The 46th Meeting for Young Organometallic Chemists Summer School, Miyagi Zao Royal Hotel, Japan, July 8-10th, 2013.
- (143) "Organic synthesis: Connect molecules, create values", Ichinomiya High School, Aichi, Japan, July 4th, 2013.
- (142) "Toward transformative arene-assembled molecules" The 14th Tetrahedron Symposium, Vienna, Austria, June 25-28th, 2013.
- (141) "A journey toward transformative molecules: Breakthrough in arene-assembling chemistry" Japan Association for Chemical Innovation, The Advanced Chemistry/Materials Technology Subcommittee, New Materials Symposium, Japan, June 17th, 2013.
- (140) "Nagoya University Institute of Transformative Bio-Molecules" RaQualia Pharma Seminar, RaQualia Pharma, Japan, June 12th, 2013.
- (139) "A journey toward transformative molecules: Breakthrough in arene-assembling chemistry" RaQualia Pharma Seminar, RaQualia Pharma, Japan, June 12th, 2013.
- (138) "Toward transformative molecules by C-H coupling" Canadian Chemistry Conference & Exhibition, Quebec, Canada, May 26-29th, 2013.
- (137) "Toward transformative arene-assembled molecules" Stockholm University Special Lecture, Stockholm, Sweden, May 22nd, 2013.
- (136) "Toward transformative arene-assembled molecules" International Symposium "Templates in Chemistry – Present and Future", Bonn, Germany, May 16-17th, 2013.
- (135) "Toward transformative molecules: Catalyst-enabling synthetic chemistry" Munster University Special Lecture, Munster, Germany, May 14th, 2013.
- (134) "Toward transformative molecules: Catalyst-enabling synthetic chemistry" The 1st International Symposium on Transformative Bio-Molecules, Nagoya, Japan, April 18-19th, 2013.
- (133) "Development and evolution of Nagoya University, Graduate School of Science, Department of Chemistry" The 7th Alumni Meeting of Department of Chemistry, Graduate School of Science, Nagoya University, Japan, April 6th, 2013.
- (132) "Connect molecules, create value: Toward transformative molecules" Special Program Lecture, The 93rd Annual Meeting of the Chemistry Society of Japan Special Program "A New Paradigm for "MONODUKURI": Initiated with Innovative Synthetic Transformations", Ritsumeikan University, Kusatsu, Shiga, Japan, March 22nd, 2013.
- (131) "A journey toward transformative molecules" Teijin 21st Century Forum, Fuji Institute of Education and Training, Shizuoka, Japan, January 26-27th, 2013.
- (130) "Toward controlled synthesis of carbon nanotubes and nanographenes" International Symposium on Frontiers of Macrocyclic and Supramolecular Chemistry, Tsinghua University, Beijing, China, December 20-22nd, 2012.
- (129) "Synthesis of cycloparaphenylenes directed towards controlled synthesis of carbon nanotubes" Tokuyama Foundation Results Presentation, Japan, December 13-14th, 2012.
- (128) "Toward controlled synthesis of carbon nanotubes and nanographenes" 2012 Japan-USA Seminar on Polymer Synthesis: Advances at the Interface of Sustainability and Polymer Synthesis, Santa Barbara, California, USA, December 1-5th, 2012.
- (127) "Organic synthesis: Connect molecules, create values" 2012 Synthetic Organic Chemistry Autumn Seminar of The Society of Synthetic Organic Chemistry, Japan, The Pharmaceutical Society of Japan Nagai Memorial Hall, Shibuya, Tokyo, Japan, November 20-21st, 2012.
- (126) "Chemistry of Nagoya University" Nagoya University Homecoming Day, Japan, October 20, 2012.
- (125) "Toward transformative molecules by C-H coupling" The 1st Symposium of C-H Activation, Peking University, Beijing, China, October 5-8th, 2012.

- (124) "Connect molecules and create values through coupling: New reactions, catalysts, bioactive compounds, and nanocarbons" Advanced Catalytic Transformation Symposium, Tokyo Institute of Technology, Ookayama, Tokyo, Japan, September 21st, 2012.
- (123) "Toward transformative arene-assembling chemistry" The 70th Anniversary Symposium of the Society of Synthetic Organic Chemistry, Japan, Shizuoka Convention & Art Center "GRANSHIP", Shimizu, Shizuoka, Japan, September 5-7th, 2012.
- (122) "Chemistry of Nagoya University" Nagoya University Open Campus, Japan, August 10th, 2012.
- (121) "Arene assembly through C-H coupling: New catalysts and applications" The 7th Asian European Symposium on Metal-Mediated Efficient Organic Synthesis, ICIQ, Tarragona, Spain, July 22-25th, 2012.
- (120) "Organic synthesis: Connect molecules, create values" Nagoya University's Lecture at Kawaijuku Educational Institution, Kawaijuku Chikusa School, Japan, July 15th, 2012.
- (119) "Organic synthesis: Connect molecules, create values" Koei Chemical Company Special Seminar, Koei Chemical Company Limited, Sodegaura, Chiba, Japan, June 20th, 2012.
- (118) "Challenges in arene-assembling chemistry" The 7th International Conference on Advancing the Chemical Sciences (ISACS 7), University of Edinburgh, UK, June 12-15th, 2012.
- (117) "Chemistry of Nagoya University" Nagoya University Graduate School Orientation Meeting, Nagoya University, Japan, June 9th, 2012.
- (116) "Organic synthesis: Connect molecules, create values" The 23rd Banyu Sendai Symposium, Sendai International Center, Sendai, Japan, June 2nd, 2012.
- (115) "Innovative arene-assembled materials through green chemical processes", German Innovation Award Presentation, Hotel New Otani, Tokyo, Japan, May 18th, 2012.
- (114) "Organic synthesis: Connect molecules, create values" Ministry of Finance Special Presentation, Nagoya University, Japan, May 15th, 2012.
- (113) "Recent advances in C-H functionalization" Wuhan University Special Lecture, Wuhan University, Wuhan, China, April 23rd, 2012.
- (112) "Organic synthesis: Connect molecules, create values" Shionogi Special Seminar, Shionogi & Co., Ltd., Osaka, Japan, March 16th, 2012.
- (111) "Challenges in arene-assembling chemistry" Ehime University, Matsuyama, Ehime, Japan, March 14th, 2012.
- (110) "Toward controlled synthesis of carbon nanotubes" Grant-in-Aid for Scientific Research on Innovative Areas, "Emergence of Highly Elaborated  $\pi$ -Space and Its Function" Open Symposium, Matsuyama, Japan, March 13-14th, 2012.
- (109) "Challenges in arene-assembling chemistry" Department of Applied Chemistry, School of Engineering, The University of Tokyo Symposium, Hongo, Tokyo, Japan, March 3rd, 2012.
- (108) "Challenges in arene-assembling chemistry" Harvard University, USA, February 3rd, 2012.
- (107) "Challenges in arene-assembling chemistry" Novartis-MIT Lecture in Organic Chemistry, Massachusetts Institute of Technology, USA, February 2nd, 2012.
- (106) "Challenges in arene-assembling chemistry" Boston College, USA, February 1st, 2012.
- (105) "Challenges in arene-assembling chemistry" Osaka University, Japan, January 26-27th, 2012.
- (104) "Chemistry of Nagoya University" Department of Chemistry Orientation Meeting, Nagoya University, Japan, December 21st, 2012.
- (103) "Catalytic C-H bond functionalization: Emerging tools for pharmaceuticals, natural products, and organic materials" The 6th International Conference on Cutting-Edge Organic Chemistry in Asia (ICCEOCA-6), The Chinese University of Hong Kong, December 11-15th, 2011.
- (102) "Toward controlled synthesis of carbon nanotubes and nanographenes" Japan Society for the Promotion of Science University-Industry Research Cooperation Committee (The 181st Committee

- on Multifunctional Molecular Electronics) Research Meeting, Museum & Centennial Hall, Tokyo Institute of Technology, Japan, December 7-8th, 2011.
- (101) "Direct arylation of polycyclic aromatic hydrocarbons" The 11th Tateshina Conference on Organic Chemistry, Japan, November 11-13th, 2011.
- (100) "New aspects in arene-assembling chemistry: New reactions, catalysts, pharmaceuticals, natural products, and nanocarbons" The 7th International BASF Boron Conference, Roppongi Academy Hills, Tokyo, Japan, November 9-10th, 2011.
- (99) "Organic synthesis: Connect molecules, create values; Architect on the Nano-scale" The Chemistry Society of Japan Tokai Branch "Invitation to Chemistry "super organic materials", Nagoya University Noyori Conference Hall, Japan, November 5th, 2011.
- (98) "Organic synthesis: Connect molecules, create values" Japan-Singapore Chemicals R&D Conference 2011 "Innovation for Sustainable Growth", A\*Star, Biopolis, Singapore, October 20-21st, 2011.
- (97) "Challenges in arene-assembling chemistry" Toray Special Seminar, Toray Pharmaceutical Research Laboratory, Fujisawa, Japan, October 11th, 2011.
- (96) "Challenges in arene-assembling chemistry" ETH Seminar of Organic Chemistry, ETH Zurich, Switzerland, September 26th, 2011.
- (95) "Toward controlled synthesis of carbon nanotubes" Nozoe Memorial Award Lecture, The 22nd Symposium on Physical Organic Chemistry, International Congress Center, Tsukuba, Japan, September 22nd, 2011.
- (94) "Synthesis and properties of multisubstituted olefins and fullerenes" Wuhan University Special Lecture, Wuhan University, China, September 8th, 2011.
- (93) "Challenges in arene-assembling chemistry" Wuhan University Special Lecture, Wuhan University, China, September 5th, 2011.
- (92) "Toward controlled synthesis of carbon nanotubes and graphenes: New strategy and catalysts for arene assembly" The 1st Symposium on "New Frontiers in Organic Chemistry: Towards Cleaner, Greener Chemical Processes" Beijing Chateau Laffitte Hotel, Beijing, China, September 1-4th, 2011.
- (91) "Chemistry of Nagoya University" Nagoya University Open Campus, Japan, August 10th, 2011.
- (90) "Toward controlled synthesis of carbon nanotubes and graphenes" The 14th International Symposium on Novel Aromatic Compounds (ISNA-14), University of Oregon, Eugene, Oregon, USA, July 24-29th, 2011.
- (89) "Chemistry of Nagoya University" Nagoya University Graduate School Orientation Meeting, Nagoya University, Japan, June 18th, 2011.
- (88) "Toward controlled synthesis of nanocarbons" The 11th IRTG Munster-Nagoya Joint Symposium, University of Munster, Germany, May 9-10th, 2011.
- (87) "Challenges in arene-assembling chemistry" The 5th Mitsui Chemicals International Symposium on Catalysis Science (MICS2011), Kazusa Academia Hall, Kisarazu, Chiba, Japan, March 9-10th, 2011.
- (86) "Connect molecules, create values by cross-coupling: Architect on the nano-scale, Nobel Prize in Chemistry and the future" The 11th Science Cafe in Nagoya by the Science Council of Japan, Daitec Sakae, Nagoya, Japan, February 26th, 2011.
- (85) "Challenges in arene-assembling chemistry" The 1st International Conference on MEXT Project of Integrated Research on Chemical Synthesis "Advanced Chemical Methodology for Creating Materials", Catalysis Research Center, Hokkaido University, Japan, January 24-25th, 2011.



- (84) "C-H bond arylation of arenes through Rh, Ir, Cu, Pd, and Ni catalysis" The International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), #1964, Honolulu, USA, December 19th, 2010.
- (83) "Molecular catalysis for nanocarbon chemistry" The International Chemical Congress of Pacific Basin Societies (Pacifichem 2010), #16, Honolulu, USA, December 15th, 2010.
- (82) "3D organic architectural chemistry" JST-PRESTO Structure Control and Function Final Symposium, Tokyo Garden Palace, Ochanomizu, Tokyo, Japan, December 9th, 2010.
- (81) "Cycloparaphenylenes: Synthesis, structures, and properties" The 10th IRTG Münster-Nagoya Joint Seminar, University of Münster, Germany, November 30th, 2010.
- (80) "Cycloparaphenylenes: Synthesis, structures, and properties" The 10th Tateshina Conference on Organic Chemistry, Tateshina Forum, Nagano, Japan, November 12-14th, 2010.
- (79) "Cycloparaphenylenes: Synthesis, structures, and properties" Hangzhou Symposium on Supramolecular Systems and Biomaterials, Zhejiang University, Hangzhou, China, October 31st, 2010.
- (78) "Challenges in arene-assembling chemistry" The 20th Symposium on Optically Active Compounds, Tokyo, Japan, October 29th, 2010.
- (77) "Cycloparaphenylenes: Synthesis, structures, and properties" International Symposium on Polyaromatics, National Taiwan University, Taiwan, October 9th, 2010.
- (76) "Challenges in arene-assembling chemistry" Sumitomo Chemicals Special Lecture, Sumitomo Chemical Company IT-Related Chemicals Research Laboratory, Osaka, Japan, September 30th, 2010.
- (75) "Challenges in arene-assembling chemistry" JAI Seminar in Aichi, Abo Hall, Nagoya, Japan, September 28th, 2010.
- (74) "Cycloparaphenylenes: Synthesis, structures, and properties" China-Japan Symposium on Catalytic Organic Synthesis, Nankai University, Tianjin, China, September 25th, 2010.
- (73) "Have we gone the right path in the last 10 years" Noyori Forum 10th Anniversary Lecture, Hotel Pacific Tokyo, Japan, September 4th, 2010.
- (72) "Cycloparaphenylenes: Synthesis, structures, and properties" New Directions for the Electron State Theory Symposium, Okazaki Conference Center, Aichi, Japan, August 10th, 2010.
- (71) "Challenges in arene-assembling chemistry" The 42nd Meeting for Young Structural Organic Chemists, Hotel Honnoji, Kyoto, Japan, August 6th, 2010.
- (70) "Chemical synthesis of aromatic carbon nanorings" Japan-China Joint Symposium on Functional Supramolecular Architectures, Jilin University, Changchun, China, July 25th, 2010.
- (69) "Challenges in arene-assembling chemistry" The 12th Belgian Organic Synthesis Symposium (BOSS-12), University of Namur, Namur, Belgium, July 14th, 2010.
- (68) "Benzene and me" Meiwa High School Special Lecture, Meiwa High School, Nagoya, Japan, June 21st, 2010.
- (67) "Challenges in arene-assembling chemistry" The 3rd Annual Symposium of Nagoya University Global COE in Chemistry 3rd Annual Symposium, R-04, Nagoya University, Japan, June 16th, 2010.
- (66) "Benzene and me" Okazaki North High School Special Lecture, Nagoya University, Japan, June 4th, 2010.
- (65) "Chemical synthesis of sidewall segments of carbon nanotubes" The 6th Asian-European Symposium on Metal Mediated Efficient Reactions, Nanyang Technological University, Singapore, June 8th, 2010.

- (64) "Chemical synthesis of sidewall segments of carbon nanotubes: Cycloparaphenylenes and related carbon nanorings" The 93rd Canadian Chemistry Conference and Exhibition, Toronto, Canada, May 31st, 2010.
- (63) "Challenges in arene-assembling chemistry" The 10th Convention on Pharmaceutical Ingredients (CPhI), Tokyo Bigsight, Japan, April 21st, 2010.
- (62) "Challenges in arene-assembling chemistry" Special Lecture in Peking University, China, April 9th, 2010.
- (61) "Challenges in arene-assembling chemistry" Special Lecture in Wuhan University, China, April 8th, 2010.
- (60) "Challenges in arene-assembling chemistry" Special Lecture in University of Sciences and Technology, China, April 7th, 2010.
- (59) "Benzene and me; Challenge to Become a Nano-scale Architect" SSH Natural Science Seminar, Nagoya University, Japan, December 19th, 2009.
- (58) "Molecular catalysis for nanocarbon chemistry" International Symposium on Catalysis and Fine Chemicals 2009, December 15th, 2009.
- (57) "Molecular catalysis for nanocarbon chemistry" China-Japan Symposium on Advanced Organic Chemistry, November 29th, 2009.
- (56) "Challenges in arene-assembling chemistry" The 6th Catalysis Sagami Seminar, Kanagawa, Japan, November 19th, 2009.
- (55) "New catalysis leading to privileged organic structures" IRTG Munster-Nagoya Meeting, Nagoya University, Japan, September 28th, 2009.
- (54) "Challenges in arene-assembling chemistry" Kyoto University Organic Chemistry Seminar, Kyoto, Japan, September 17th, 2009.
- (53) "Challenges in arene-assembling chemistry" Sumitomo Chemicals Special Seminar, Sumitomo Chemicals, Japan, September 14th, 2009.
- (52) "Challenges in arene-assembling chemistry" The 55th Organic Chemistry Research Meeting (Shirasagi Seminar), Japan, September 7th, 2009.
- (51) "Programmed synthesis of tetraarylthiophenes through sequential C-H bond arylation" Grant-in-Aid for Scientific Research on Priority Areas "Chemistry of Concerto Catalysis" International Symposium, Japan, August 28th, 2009.
- (50) "Challenges in arene-assembling chemistry" The 21st Banyu Sapporo Symposium, Sapporo, Japan, July 4th, 2009.
- (49) "Challenges in arene-assembling chemistry" Rising Organic Chemists in Catalysis Meeting (ROCCAT), Munster, Germany, June 18th, 2009.
- (48) "Challenges in arene-assembling chemistry" Kyoto University GCOE "Integrated Materials Science" Seminar, Kyoto University, Japan, May 30th, 2009.
- (47) "Challenges in arene-assembling chemistry Teijin Pharma Special Seminar, Teijin Pharma, Japan, May 12th, 2009.
- (46) "Arene-assembly based on catalytic direct functionalization of C-H bonds" Division of Organometallic Chemistry, The Kinki Chemical Society Meeting, 4th Regular Meeting of 2007, Osaka Science & Technology Center, Japan, February 2nd, 2009.
- (45) "Catalytic direct functionalization of arene compounds and fullerene" Ministry of Education, Culture, Sports, Science and Technology Special Funds for Education and Research, Joint Project of Chemical Synthesis Core Research Institutions, The 4th Symposium on Materials Science "The Link Between Synthetic Chemistry and Nanochemistry", Nagoya University, Japan, January 24th, 2009.

- (44) "Catalytic direct functionalization of unsaturated organic molecules" 13th Symposium of High-tech Research Center Okayama University of Science, Japan, December 11th, 2008.
- (43) "Carbon-hydrogen bond functionalization through concerted molecular catalysis" Grant-in-Aid for Scientific Research on Priority Areas "Chemistry of Concerto Catalysis" International Symposium, Osaka University, Japan, December 3rd, 2008.
- (42) "Catalytic direct functionalization of unsaturated organic molecules" Organic Synthetic Chemistry Symposium of Autumn 2008, The Pharmaceutical Society of Japan Nagai Memorial Hall, Shibuya, Tokyo, Japan, November 19th, 2008.
- (41) "Catalytic direct functionalization of arene compounds and fullerene" Molecular Catalysis Seminar "Strategy for Dissecting Bonds Between Multiple-Bonds and New Approaches for Transformation Reactions", Tokyo University of Agriculture and Technology, Japan, November 15th, 2008.
- (40) "Functionalization of unsaturated organic molecules through metal catalysis: Alkenes, arenes, and fullerenes" Merck-Banyu Lecture, University of Chicago, USA, October 27th, 2008.
- (39) "Functionalization of unsaturated organic molecules through metal catalysis: Alkenes, arenes, and fullerenes" Merck-Banyu Lecture, The Scripps Research Institute, USA, October 24th, 2008.
- (38) "Functionalization of unsaturated organic molecules through metal catalysis: Alkenes, arenes, and fullerenes" Merck-Banyu Lecture, Stanford University, USA, October 22nd, 2008.
- (37) "Functionalization of unsaturated organic molecules through metal catalysis: Alkenes, arenes, and fullerenes" Merck-Banyu Lecture, University of California, Berkeley, USA, October 21st, 2008.
- (36) "Functionalization of unsaturated organic molecules through metal catalysis: Alkenes, arenes, and fullerenes" Merck-Banyu Lecture, Harvard University, USA, October 17th, 2008.
- (35) "Functionalization of unsaturated organic molecules through metal catalysis: Alkenes, arenes, and fullerenes" Merck-Banyu Lecture, MRL-Boston, Merck, USA, October 16th, 2008.
- (34) "Functionalization of unsaturated organic molecules through metal catalysis: Alkenes, arenes, and fullerenes" Merck-Banyu Lecture, Princeton University, USA, October 14th, 2008.
- (33) "Functionalization of unsaturated organic molecules through metal catalysis: Alkenes, arenes, and fullerenes" Merck-Banyu Lecture, MRL-Rahway, Merck, USA, October 13th, 2008.
- (32) "Arene-assembly based on C-H bond functionalization" The 102nd Catalysis Meeting of the Catalysis Society of Japan, Nagoya University, Japan, September 25th, 2008.
- (31) "Catalytic direct functionalization of unsaturated organic molecules" Kwansai Gakuin University, Japan, August 26th, 2008.
- (30) "Catalytic direct functionalization of aromatics and nanocarbons" The 91st Canadian Chemistry Conference and Exhibition, Shaw Conference Centre, Edmonton, Canada, May 24th, 2008.
- (29) "Catalytic direct functionalization of unsaturated organic molecules" Kyoto University, Japan, May 13th, 2008.
- (28) "Catalytic direct functionalization of unsaturated organic molecules" The 18th Banyu Fukuoka Symposium, Centennial Hall Kyushu University School of Medicine, Japan, May 10th, 2008.
- (27) "Innovation of synthetic chemistry towards new creation" Nagoya University Open Seminar, Japan, March 24th, 2008.
- (26) "Catalytic direct functionalization of unsaturated organic molecules" Grant-in-Aid for Scientific Research on Priority Areas "Synergistic Effects for Creation of Functional Molecules" The 3rd Young Colloquium, Osaka University, Osaka University Nakanoshima Center, Japan, March 15th, 2008.
- (25) "Catalytic direct functionalization of unsaturated organic molecules: To become an irreplaceable craftsman in "monodukuri" Tokyo Institute of Technology, Japan, January 15th, 2008.
- (24) "Catalytic direct functionalization of aromatics" 2007 Workshop on Organometallic Chemistry, RIKEN, Wako, Japan, November 8-9th, 2007.

- (23) "Catalytic direct functionalization of unsaturated organic molecules" The 2nd Forum for Inter-University Research, Nagoya University, Japan, November 2-3rd, 2007.
- (22) "Creation of privileged structures based on catalytic direct functionalization of olefins and aromatics" National Taiwan University, Taiwan, September 21st, 2007.
- (21) "Creation of privileged structures based on catalytic direct functionalization of olefins and aromatics" National Tsing-Hua University, Taiwan, September 20th, 2007.
- (20) "Creation of privileged structures based on catalytic direct functionalization of olefins and aromatics" National Taiwan Normal University, Taiwan, September 19th, 2007.
- (19) "Catalytic direct functionalization of aromatics: Arenes, heteroarenes, and fullerenes" The 4th IRTG Münster-Nagoya Joint Seminar, University of Münster, Germany, September 6th, 2007.
- (18) "Creation of functional materials based on catalytic direct C-H bond functionalization" Nagoya University Global COE Kick-off Meeting, Japan, August 24th, 2007.
- (17) "Catalytic direct C-H bond functionalization: To become an irreplaceable craftsman in "monodukuri" The 42nd Meeting for Young Organic Chemists, Gifu, Japan, July 12-14th, 2007.
- (16) "Creation of privileged organic structures based on catalytic C-H bond functionalization" McGill University, Canada, June 22nd, 2007.
- (15) "Creation of privileged organic structures based on catalytic C-H bond functionalization" Université de Montréal, Canada, June 21st, 2007.
- (14) "Creation of privileged organic structures based on catalytic C-H bond functionalization" University of Ottawa, Canada, June 20th, 2007.
- (13) "Creation of privileged organic structures based on catalytic C-H bond functionalization" Queen's University, Canada, June 18th, 2007.
- (12) "Creation of privileged organic structures based on catalytic C-H bond functionalization" University of Toronto, Canada, June 15th, 2007.
- (11) "Catalytic direct C-H bond functionalization: To become an irreplaceable craftsman in "monodukuri" Japan Advanced Institute of Science and Technology, Japan, June 1st, 2007.
- (10) "Creation of functional materials based on catalytic C-H bond functionalization" The 3rd IRTG Münster-Nagoya Joint Seminar, Nagoya University, Japan, April 19-20th, 2007.
- (9) "Catalytic direct C-H bond functionalization" Kyushu University Special Seminar, February 16th, 2007.
- (8) "Creation of functional materials based on catalytic direct C-H bond functionalization" Takasago Special Seminar, Takasago International Corporation, Japan, January 31st, 2007.
- (7) "Development of molecular catalyst directed towards organic architectural chemistry" The 2nd Kyoto University Organic Chemistry COE Joint Symposium, "Diversity and Prospects of Precision Organic Synthesis", Kyoto University, Japan, December 15th, 2006.
- (6) "Direct C-H arylation of heteroarenes and arenes via metal catalysis" The 10th International Kyoto Conference on New Aspects of Organic Chemistry (IKCOC-10), Kyoto, Japan, November 13-17th, 2006.
- (5) "Creation of functional materials based on molecular catalytic chemistry" Forum of Inter-University Research, Kyoto, Japan, September 1st, 2006.
- (4) "Programmed molecular construction methods based on precision molecular catalysts" Mitsui Chemicals Special Seminar, Mitsui Chemicals, Inc. Catalysis Science Laboratory, Sodegaura, Chiba, Japan, August 28th, 2006.
- (3) "Targeting olefins, arenes, and their assemblies" International Conference on Biodiversity and Natural Products, Kyoto, Japan, July 24th, 2006.
- (2) "Creation of functional materials based on catalytic C-H functionalization" Nagoya University 21COE Results Report Meeting, Nagoya University, Japan, July 7th, 2006.

- (1) "Programmed molecular construction methods based on precision molecular Catalysts" Nagoya University Chemistry Seminar, Nagoya University, Japan, May 26th, 2006.

### Alumni in academic

- (52) Bumppei Maeda Assistant Professor, Keio University, Japan
- (51) Ayaka Ueda Designated Assistant Professor, Nagoya University, Japan
- (50) Yota Sakakibara Assistant Professor, Kwansai Gakuin University, Japan
- (49) Usami Atsushi Designated Assistant Professor, Nagoya University, Japan
- (48) Kwan Yin Cheung Assistant Professor, National Sun Yat-sen University, Taiwan
- (47) Hayato Yamada Designated Assistant Professor, Nagoya University, Japan
- (46) Wataru Matsuoka Assistant Professor, Hokkaido University, Japan
- (45) Kenta Kato Assistant Professor, Waseda University, Japan
- (44) Kei Murakami Associate Professor (PI), Kwansai Gakuin University, Japan
- (43) Chaolumen Designated Professor, Inner Mongolia University, China
- (42) Yuanming Li Professor, Fuzhou University, China
- (41) Masahiko Yoshimura Designated Assistant Professor, Kyoto University, Japan
- (40) Nobuhiko Mitoma Designated Assistant Professor, Nagoya University, Japan  
(current: Research Scientist, RIKEN CEMS)
- (39) Maciej Krzeszewski Senior Scientist, Polish Academy of Sciences, Poland
- (38) Kazuma Amaike Designated Assistant Professor, Nagoya University, Japan  
(current: Assistant Professor, Nagoya University, Japan)
- (37) Yutaro Saito Assistant Professor, The University of Tokyo, Japan
- (36) Gregory Perry Lecturer, University of Manchester, UK  
(current: Lecturer (PI), University of Southampton, UK)
- (35) Aki Miura Designated Assistant Professor, Nagoya University, Japan
- (34) Takayuki Nakamuro Designated Assistant Professor, The University of Tokyo, Japan  
(current: Designated Associate Professor, The University of Tokyo)
- (33) Hirotohi Sakamoto Designated Lecturer, Nagoya University, Japan  
(current: Designated Lecturer, Kyoto University)
- (32) Yuhei Miyauchi Professor, Kyoto University, Japan
- (31) Hsing-An Lin Assistant Professor, Shanghai University, China
- (30) Feijiu Wang Assistant Professor, Nanjing University, China
- (29) Shinya Hagihara Team Leader (PI), RIKEN, CSRS, Japan
- (28) Asraa Ziadi Assistant Professor, Nagoya University, Japan
- (27) Jiao Jiao Lecturer, Xi'an Jiaotong University, China  
(current: Associate Professor, Xi'an Jiaotong University, China)
- (26) Noriaki Ozaki Assistant Professor, Yokohama City University, Japan  
(current: company)
- (25) Tomohiro Fukushima Assistant Professor, Hokkaido University, Japan  
(current: Lecturer, Hokkaido University, Japan)
- (24) Takehisa Maekawa Designated Assistant Professor, Nagoya University, Japan  
(current: Research Associate, Academia Sinica, Taiwan)
- (23) Liu Hong Associate Professor, Jiangnan University, China
- (22) Linghui Meng Associate Professor, Huazhong University of Science and Technology, China
- (21) Hua Zhang Associate Professor, South-Central University for Nationalities in

- Wuhan, China
- (20) Takuya Kuwabara Assistant Professor, Chuo University, Japan  
(current: Lecturer (PI), Ochanomizu University, Japan)
  - (19) Akiko Yagi Assistant Professor, Nagoya University, Japan  
(current: Designated Associate Professor, Nagoya University, Japan)
  - (18) Kei Muto Assistant Professor, Waseda University, Japan  
(current: Associate Professor, Waseda University, Japan)
  - (17) Junichiro Yamaguchi Associate Professor (PI), Waseda University, Japan  
(current: Professor, Waseda University, Japan)
  - (16) Taishi Nishihara Designated Assistant Professor, Nagoya University, Japan  
(current: Designated Assistant Professor, Kyoto University, Japan)
  - (15) Hiroshi Ueno Assistant Professor, Nagoya University, Japan  
(current: Assistant Professor, Tohoku University, Japan)
  - (14) Hiroyuki Tanaka Designated Assistant Professor, Nagoya University, Japan  
(current: Designated Associate Professor, Kyoto University)
  - (13) Eiji Yamaguchi Assistant Professor, Gifu Pharmaceutical University, Japan  
(current: Associate Professor, Gifu Pharmaceutical University, Japan)
  - (12) Yasutomo Segawa Designated Associate Professor, Nagoya University, Japan  
(current: Associate Professor (PI), Institute for Molecular Science)
  - (11) Anna Junker Assistant Professor (PI), University of Münster, Germany  
(current: Professor, University of Tübingen, Germany)
  - (10) Katsuaki Kawasumi Assistant Professor, Okayama University, Japan  
(current: company)
  - (9) Hideto Ito Lecturer, Nagoya University, Japan  
(current: Associate Professor, Nagoya University, Japan)
  - (8) Haruka Omachi Assistant Professor, Nagoya University, Japan  
(current: Lecturer, Nagoya University, Japan)
  - (7) Masakazu Nambo Designated Assistant Professor, Nagoya University, Japan  
(current: Designated Associate Professor, Nagoya University, Japan)
  - (6) Jean Bouffard Associate Professor (PI), Ewha Womans University, Korea  
(current: Professor, Ewha Womans University, Korea)
  - (5) Jérôme Canivet Permanent CNRS researcher (PI), IRCELYON, CNRS, France
  - (4) Olivier Coutelier Assistant Professor, University of Paul Sabatier and CNRS, France
  - (3) Toshiyuki Kamei Assistant Professor, Nara National College of Technology, Japan  
(current: Professor, Nara National College of Technology)
  - (2) Toshiki Nokami Assistant Professor, Kyoto University, Japan  
(current: Professor, Tottori University, Japan)
  - (1) Koichi Mitsudo Assistant Professor, Okayama University, Japan  
(current: Associate Professor, Okayama University, Japan)