

Sunkyu Han

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PERSONAL DATA

Born in July 17th, 1982, Pisa, Italy (residence in Italy from 1982 to 1990).

EXPERIENCES & EDUCATION

Korea Advanced Institute of Science and Technology

Daejeon, Korea

Professor

September 2024 – present

Associate Professor with Tenure

September 2021 – August 2024

Associate Professor

March 2019 – August 2021

Assistant Professor

July 2014 – February 2019

Yale University

New Haven, CT, US

Postdoctoral Associate, Professor Scott J. Miller

July 2012 – June 2014

Massachusetts Institute of Technology

Cambridge, MA, US

Graduate Student, Professor Mohammad Movassaghi

November 2006 – June 2012

Ph.D., Organic Chemistry

Korea Institute of Science and Technology

Seoul, Korea

Research Scientist, Dr. Changjoon Justin Lee

March 2006 – July 2006

Korea Advanced Institute of Science and Technology

Daejeon, Korea

Undergraduate Student, Professor Sukbok Chang

January 2005 – February 2006

B.S., Chemistry, *summa cum laude*, 2nd out of 412

FELLOWSHIPS & AWARDS

- KAIST Education Innovation Award (KAIST, 2025)
- BKCS Academic Award (Korean Chemical Society, 2025)
- Synlett Best Paper Award 2024 (Thieme, 2025)
- Samsung HumanTech Paper Award, Special Award for Advising Gold Prize Winner Seongrok Heo (Samsung Electronics, 2025)
- Asian Core Program / the 17th International Conference on Cutting-Edge Organic Chemistry in Asia (ICCEOCA-17) Award (ACP Coordinators of Taiwan and Hong Kong, 2024)
- The 34th Korean Science and Technology Excellent Papers Award (The Korean Federation of Science and Technology Societies, 2024)
- College of Natural Sciences Best Teaching Award (KAIST, 2024)
- Award for Departmental Services (Department of Chemistry, KAIST, 2024)

- BMS Lectureship (Department of Chemistry, MIT, 2024)
- Amgen Lectureship (Department of Chemistry, University of Illinois at Urbana-Champaign, 2024)
- Achievement Award (Asian Federation for Medicinal Chemistry, 2023)
- Young Scientist Award (The President of the Republic of Korea, 2022)
- KCS-Wiley Young Chemist Award (Korean Chemical Society, 2022)
- Young Scientist Award (Korean Society of Organic Synthesis, 2021)
- Award for Departmental Services (Department of Chemistry, KAIST, 2021)
- Elected Member of Young Korean Academy of Science and Technology (The Korean Academy of Science and Technology, 2021)
- Young Organic Chemist Award (Division of Organic Chemistry, Korean Chemical Society, 2020)
- Asian Core Program/ICCEOCA-14 Lectureship Awards (ACP 2019 coordinators of Japan & Singapore, 2019)
- Hanseong Science Award (Hanseong Sonjaehan Scholarship Foundation, 2019)
- New Talent by *Organic & Biomolecular Chemistry* (Royal Society of Chemistry, 2019)
- LINKGENESIS-Best Teacher Award (KAIST-Linkgenesis, 2019)
- Junior Scientists Participation (JSP) Program Fellowship, 53rd Bürgenstock Conference (Division of Fundamental Research of the Swiss Chemical Society, 2018)
- Emerging Investigators by *Chemical Communications* (Royal Society of Chemistry, 2018)
- College of Natural Sciences Best Teaching Award (KAIST, 2018)
- EWon Assistant Professorship (KAIST, 2018–2021)
- Thieme Chemistry Journals Award (Thieme Chemistry, 2018)
- POSCO TJ Park Science Fellowship (POSCO TJ Park Foundation, 2017–2018)
- Asian Core Program/Advanced Research Network Lectureship Award (ACP 2016 coordinator of China, 2016)
- College of Natural Sciences Best Teaching Award (KAIST, 2016)
- Kenneth M. Gordon Summer Graduate Fellowship in Organic Chemistry (MIT, 2011)
- EMD Serono Summer Graduate Fellowship (MIT, 2010)
- The Korea Foundation for Advanced Studies Scholarship. (presented to 30 Korean university students in all fields of studies including humanities, social sciences, engineering, and natural sciences, KAIST, 2005)
- ARCOM (Army Commendation Medal), awarded by Brigadier General Richard W. Mills (Special Operations Command Korea (SOCKOR), 2004).
- GE Foundation Scholar-Leaders Award (presented to 7 Korean Undergraduate students in the fields of engineering and natural sciences, KAIST, 2002)
- Departmental Scholarship for academic excellence (KAIST, 2001, 2002, 2005).
- Gold Prize (1st place) in the 6th Samsung Humantech Thesis Prize, thesis: "An Optimal Condition of Clay Court Based on the Moisture Content of the Clay." (Gyeonggi Science High School, 2000)

ACADEMIC SERVICES

- Associate Editor, *Organic Letters* (2025.06–present)
- Young Advisory Board Member of the *Bulletin of the Korean Chemical Society* (2023–present)
- Early Career Advisory Board Member of JACS Au (2021–2022)
- Editorial Advisory Board Member of the *Journal of Organic Chemistry* (2020–present)

PUBLICATIONS

- Lee, C.; Han, S.* "Discovery, Structure Revision, Synthesis, and Application of All Known and Even Unknown Securingine Alkaloids" *Nat. Prod. Rep.* **2025**, *42*, 1251.
- Lee, Y.; Kim, T.; Kim, G.; Kim, D.; Han, S.* "Total Synthesis of (+)-Herpotrichones A–C" *J. Am. Chem. Soc.* **2025**, *147*, 26361.
- Hyun, Y. E.; Kweon, J.; Phan, T. H. L.; Kim, D.; Han, S.* "α-N-Phthalimido-Oxy Isobutyrate-Mediated Deoxygenative Arylation: Total Synthesis of Alanenses A and B" *Chem. Sci.* **2025**, *16*, 9943.
- Lee, C.; Kang, G.; You, J.; Kim, T.; Lee, H.-S.; Park, Y.*; Han, S.* "Total Synthesis of (–)-Elodeoidins A and B" *JACS Au* **2025**, *5*, 1096.

- Park, S.; Kang, G.; Kim, W.; Jeon, S.; Chung, M. K.; Lee, H.-S.; Yoon, D. K.;* Han, S.* "Synthesis of Securingine B Enables Photoresponsive Materials Design" *Chem* **2025**, *11*, 102336.
- Seo, S. M.; Kim, D.; Kim, T.; Han, S.* "Total Synthesis of (–)-Flueggeine A and (–)-15-*epi*-Flueggeine D" *Chem. Sci.* **2025**, *16*, 1216.
- Kim, S.;† Park, I. W.;† Kim, M.; Lee, G. S.; Kim, C. S.;* Han, S.* "Synthesis and Structure Revision of Securingine E" *Org. Lett.* **2024**, *26*, 7166 (†These authors contributed equally to this work).
- Chen, S.; Babazade, R.; Kim, T.; Han, S.* Jung, Y.* "A Large-Scale Reaction Dataset of Mechanistic Pathways of Organic Reactions" *Sci. Data* **2024**, *11*, 863.
- Kim, M.;† Park, S.;† Kang, G.;† Jang, Y. S.;† Kim, K. H.;* Han, S.* Kim, C. S.* "Natural Product Anticipation via Chemical Synthesis: Discovery of Two New Securinega Alkaloids" *iScience* **2024**, *27*, 110495 (†These authors contributed equally to this work).
- Lee, S.; Kang, G.;* Han, S.* "Development of an Easy-To-Handle Redox Active Group for Alcohols: Catalytic Transformation of Tertiary Alcohols to Nitriles" *Org. Lett.* **2024**, *26*, 5640.
- Youn, T.; Kim, T.; Han, S.* "Total Synthesis of (–)-Securingine G" *Chem. Commun.* **2024**, *60*, 6391.
- Kim, S.; Lee, H.-S.; Han, S.* "Transformations of (Allo)Securinine to (Allo)Norsecurinine via a Molecular Editing Strategy" *Front. Chem.* **2024**, *12*, 1355636.
- Kang, G.; Han, S.* "Synthesis of Suffranidine B" *J. Am. Chem. Soc.* **2023**, *145*, 24493.
- Kim, T.; Kim, S.; Chung, G.; Park, K.;* Han, S.* "Re-examining the Stereochemistry of Polycyclic Suffruticosine via TDDFT Calculations, ECD Spectroscopy, and Chemical Synthesis" *Org. Chem. Front.* **2023**, *10*, 5123.
- Park, S.; Kim, D.; Yang, W.; Han, S.* "Total Synthesis of 4 α -Hydroxyallosecurinine and Securingine F, Securinega Alkaloids with a C4-Hydroxyl Handle for Biofunctional Derivatizations" *Synlett* **2024**, *35*, 593.
- Kim, J.;† Lee, S.;† Han, S.* Lee, H.-Y.* "Divergent Synthesis of Conidiogenones B–F and 12 β -Hydroxyconidiogenone C" *Chem* **2023**, *9*, 1270.(†These authors contributed equally to this work).
- Kang, G.; Park, S.; Han, S.* "Synthesis of High-Order and High-Oxidation State Securinega Alkaloids" *Acc. Chem. Res.* **2023**, *56*, 140.
- Han, S.* "K-Synthesis": Recent Advancements in Natural Product Synthesis Enabled by Unique Methods and Strategies Development in Korea" *Bull. Kor. Chem. Soc.* **2023**, *44*, 172.
- Shin, J. S.; Lee, J.; Han, S.* Lee, H.-Y.* "Gold-Catalyzed Alkyne-Diol Bicyclopentane Formation Enables Enantioselective Divergent Total Syntheses of Attenols" *Org. Chem. Front.* **2022**, *9*, 5840.
- Park, S.; Kang, G.; Kim, C.; Kim, D.; Han, S.* "Collective Total Synthesis of C4-Oxygenated Securinine-Type Alkaloids via Stereocontrolled Diversifications on the Piperidine Core" *Nature Commun.* **2022**, *13*, 5149.
- Jang, Y.;† Kim, T. Y.;† Jeon, S.; Lim, H.; Lee, J.; Kim, S.;* Lee, C. J.;* Han, S.* "Synthesis and Structure-Activity Relationship Study of Saponin-Based Membrane Fusion Inhibitors Against SARS-CoV-2" *Bioorg. Chem.* **2022**, *127*, 105985 (†These authors contributed equally to this work).
- Jee, D. W.; Myung, J.; Little, R. D.;* Han, S.* Lee, H.-Y.* "Alkylidene Carbene from Silyl Vinyl Iodide Provides Mechanistic Insights on Trimethylenemethane Diyl-Mediated Tandem Cyclizations" *Org. Lett.* **2022**, *24*, 4399.
- Kang, G.; Han, S.* "Synthesis of Dimeric Securinega Alkaloid Flueggeacosine B: From Pd-Catalyzed Cross-Coupling to Cu-Catalyzed Cross-Dehydrogenative Coupling" *J. Am. Chem. Soc.* **2022**, *144*, 8932.
- Jeon, H.; Kang, G.; Kim, M. J.; Shin, J. S.; Han, S.* Lee, H.-Y.* "On the Erosion of Enantiopurity of Rhodonoids via Their Asymmetric Total Synthesis" *Org. Lett.* **2022**, *24*, 2181.
- Kim, T. T.; Lee, C.; Kim, D.; Lee, H.-S.; Han, S.* "Synthesis and Reactivities of 1-Hydroxyherquiline A" *Org. Lett.* **2022**, *24*, 1964.
- Lim, H.;† Seong, S.;† Kim, Y.; Seo, S.; Han, S.* "Biopatterned Reorganization of Alkaloids Enabled by Ring-Opening Functionalization of Tertiary Amines" *J. Am. Chem. Soc.* **2021**, *143*, 19966 (†These authors contributed equally).
- Kim, T. T.; Lee, C.; Heo, S.; Lee, H.-S.; Han, S.* "Synthesis of Pentacyclic Framework of Herquiline A" *Chem. Asian. J.* **2021**, *16*, 3382.
- Kim, T.; Jeon, S.; Jang, Y.; Gotina, L.; Won, J.; Ju, Y.; Kim, S.; Jang, M.; Won, W.; Park, M.; Pae, A.; Han, S.* Kim, S.;* Lee, C.J.* "Platycodin D, a Natural Component of *Platycodon Grandiflorum*, Prevents Both Lysosome- and TMRPSS2-Driven SARS-CoV-2 Infection by Hindering Membrane Fusion" *Exp. Mol. Med.* **2021**, *53*, 956.

- Kang, G.; Park, S.; Han, S.* “The Chemistry of High-Oxidation State Securinega Alkaloids” *Eur. J. Org. Chem.* **2021**, 2021, 1508.
- Kang, G.; Baik, M.-H.;* Han, S.* “Calculation-Assisted Stereochemical Analysis of Securingine A” *Bull. Kor. Chem. Soc.* **2021**, 42, 486.
- Jeon, S.; Lee, J.; Park, S.; Han, S.* “Total Synthesis of Dimeric Securinega Alkaloids (–)-Flueggeines D and I” *Chem. Sci.* **2020**, 11, 10928 (selected as *ChemSci* Pick of the Week & inside back cover).
- Jang, Y.; Han, S.* “Total Synthesis of Cinnamodial-Based Dimer (–)-Capsicodendrin” *J. Org. Chem.* **2020**, 85, 7576.
- Kim, G.; Kim, T.; Han, S.* “Total Synthesis of (+)-Pestalofone A and (+)-Iso-A82775C” *J. Org. Chem.* **2020**, 85, 6815.
- Lee, S.;† Kang, G.;† Chung, G.; Kim, D.; Lee, H.-Y.;* Han, S.* “Biosynthetically Inspired Synthesis of Secu’amamine A, Fluvirosaones A and B” *Angew. Chem. Int. Ed.* **2020**, 59, 6894 (†These authors contributed equally).
- Jo, D.; Han, S.* “Total Synthesis of (–)-FD-838 and (–)-Cephalimysin A” *Org. Lett.* **2019**, 21, 6045.
- Lim, H.; Seong, S.; Han, S.* “Syntheses of Post-Iboga Alkaloids” *Synthesis* **2019**, 51, 2737.
- Park, J.; Jeon, S.; Kang, G.; Lee, J.; Baik, M.-H.;* Han, S.* “Dimerization Strategies for the Synthesis of High-Order Securinega Alkaloids” *J. Org. Chem.* **2019**, 84, 1398.
- Seong, S.;† Lim, H.;† Han, S.* “Biosynthetically Inspired Transformation of Iboga to Monomeric Post-Iboga Alkaloids” *Chem* **2019**, 5, 353 (†These authors contributed equally).
- Hwang, J.;† Kang, T.;† Lee, J.; Choi, B.-S.;* Han, S.* “Design, Synthesis, and Biological Evaluation of C7-Functionalized DMXAA Derivatives as Potential Human-STING Agonists.” *Org. Biomol. Chem.* **2019**, 17, 1869 (†These authors contributed equally).
- Kim, G.; Kim, M. J.; Chung, G.; Lee, H.-Y.;* Han, S.* “(+)-Dimericbiscognienyne A: Total Synthesis and Mechanistic Investigations of the Key Heterodimerization” *Org. Lett.* **2018**, 20, 6886.
- Jo, D.; Han, S.* “Total Syntheses of Spirocyclic PKS-NRPS-based Fungal Metabolites” *Chem. Comm.* **2018**, 54, 6750.
- Kim, T. T.; Kim, H.; Han, S.* “Academic Research Inspired Design of an Expository Organic Chemistry Lab Course.” *J. Kor. Chem. Soc.* **2018**, 62, 99 (Front cover).
- Jeon, S.; Park, J.; Han, S.* “Syntheses of Dimeric Securinega Alkaloids” *Synlett* **2017**, 28, 2353.
- Kang, T.; Jo, D.; Han, S.* “A Six-Step Total Synthesis of Azaspirene” *J. Org. Chem.* **2017**, 82, 9335.
- Jeon, S.; Han, S.* “An Accelerated Intermolecular Rauhut–Currier Reaction Enables the Total Synthesis of (–)-Flueggeine C” *J. Am. Chem. Soc.* **2017**, 139, 6302 (Highlighted in Synfacts).
- Jo, D.; Han, S.* “Biomimetic Total Synthesis of (±)-Berkeleyamide D” *Org. Chem. Front.* **2017**, 4, 506.
- Han, S.; Le, B. V.; Hajare, H. S.; Baxter, R. G. H.; Miller, S. J.* “X-ray Crystal Structure of Teicoplanin A₂-2 Bound to a Catalytic Peptide Sequence via the Carrier Protein Strategy.” *J. Org. Chem.* **2014**, 79, 8550.
- Han, S.; Morrison, K.; Hergenrother, P. J.; Movassaghi, M.* “Total Synthesis, Stereochemical Assignment, and Biological Activity of All Known (–)-Trigonoliumines.” *J. Org. Chem.* **2014**, 79, 473 (Featured Article, front cover).
- Han, S.; Siegel, D. S.; Morrison, K. C.; Hergenrother, P. J.; Movassaghi, M.* “Synthesis and Anticancer Activity of all Known (–)-Agelastatin Alkaloids.” *J. Org. Chem.* **2013**, 78, 11970.
- Han, S.; Miller, S. J.* “Asymmetric Catalysis at a Distance: Catalytic, Site-Selective Phosphorylation of Teicoplanin.” *J. Am. Chem. Soc.* **2013**, 135, 12414.
- Han, S.; Siegel, D. S.; Movassaghi, M.* “Lithiation and Electrophilic Substitution of Dimethyl Triazones.” *Tetrahedron Lett.* **2012**, 53, 3722.
- Han, S.; Movassaghi, M.* “Concise Total Synthesis and Stereochemical Revision of all (–)-Trigonoliumines.” *J. Am. Chem. Soc.* **2011**, 133, 10768 (*Most Read Paper on July, 2011 in the J. Am. Chem. Soc.*).
- Movassaghi, M.*; Siegel, D. S.; Han, S.* “Total Synthesis of all (–)-Agelastatin Alkaloids.” *Chem. Sci.* **2010**, 1, 561 (Front cover).
- Oh, S.; Park, J.; Han, S.; Lee, J.; Roh, E.; Lee, C. J.* “Development of Selective Blockers for Ca²⁺-Activated Cl⁻ Channel Using *Xenopus laevis* oocytes with an Improved Drug Screening Strategy.” *Molecular Brain*, **2008**, 1, 14.

- Chang, S.*; Lee, M.; Jung, D.; Yoo, E.; Cho, S.; Han, S. "Catalytic One-pot Synthesis of Cyclic Amidine by Virtue of Tandem Reactions Involving Intramolecular Hydroamination Under Mild Condition." *J. Am. Chem. Soc.* **2006**, *128*, 12366.

BOOK CHAPTERS

- Han, S.* "AI, '그럼에도 불구하고', '다음'을 꿈꾸게 하다", AI, 세상을 만나다, KAIST 인공지능연구원, 도서출판 지식공감, **2022**, 97.
- Seong, S.; Lim, H.; Han, S.* "Synthesis of Types II and III Post-Iboga Alkaloids" *Strategies and Tactics in Organic Synthesis*, Elsevier, **2019**, *14*, 35.
- Movassaghi,* M.; Han, S. "Total Synthesis of all (-)-Agelastatin Alkaloids." *Asymmetric Synthesis II—More Methods and Applications* Wiley-VCH, **2012**, 391.

PRESENTATIONS

- The 2nd Asian Conference for "MONODUKURI" Strategy by Synthetic Organic Chemistry, Okinawa, Japan, Invited Speaker, *Biosynthetically Inspired Syntheses of Complex Natural Products* (Jul. 2025)
- The Chinese University of Hong Kong, Department of Chemistry, Hong Kong, Invited Departmental Seminar Presentation, *Synthesis of Securinega Alkaloids and Beyond* (Jun. 2024)
- Hong Kong Baptist University, Department of Chemistry, Hong Kong, Invited Departmental Seminar Presentation, *Synthesis of Securinega Alkaloids and Beyond* (Jun. 2024)
- The University of Hong Kong, Department of Chemistry, Hong Kong, Invited Departmental Seminar Presentation, *Synthesis of Securinega Alkaloids and Beyond* (Jun. 2024)
- The Hong Kong University of Science and Technology, Department of Chemistry, Hong Kong, Invited Departmental Seminar Presentation, *Synthesis of Securinega Alkaloids and Beyond* (Jun. 2024)
- Thieme Cheminar, Virtual, Germany, Invited Speaker, *Synthesis of Securinega Alkaloids and Beyond* (Jun. 2025)
- ACS Spring 2025 Global Virtual Symposium: Organic Synthesis in the Era of Sustainability, Virtual, USA, Invited Speaker, *Total Synthesis of Natural Products Enabled by Cross-Dehydrogenative Coupling Reactions* (Mar, 2025)
- The 24th NOST OCC (National Organic Symposium Trust Organic Chemistry Conference), Agra, India, Invited Speaker, *Biosynthetically Inspired Synthesis of Complex Natural Products* (Mar, 2025)
- The 3rd Y-KAST International Conference, Busan, Invited Speaker, *Natural Product-Inspired Molecular Photoswitch* (Feb, 2025)
- Beilstein Organic Chemistry Symposium, Limburg an der Lahn, Germany, Invited Speaker, *Securinega B-Inspired Molecular Photoswitch* (Oct, 2024)
- University of Seoul, Department of Applied Chemistry, Seoul, Korea, Departmental Seminar, *Synthesis of Complex Securinega Alkaloids* (Oct, 2024)
- The Korean Chemical Society, Division of Organic Chemistry 2024 Summer Workshop, Yeosu, Invited Speaker, *How to Always Succeed in Research* (Aug, 2024)
- Gordon Research Conference, Natural Products and Bioactive Compounds, Proctor Academy, Andover NH, USA, Invited Oral Presentation, *The Chemistry of Securinega Alkaloids* (Aug, 2024)
- The 11th InterAcademy Workshop on Catalytic Activation of Low-Reacting Bonds Towards Sustainable Organic Transformations, Italy, Milan, Invited Speaker, *Natural Products-Inspired Development of Catalytic Reactions and Beyond* (Jun 2024)
- The 1st KAIST Cross-Generational Symposium on Organic Chemistry, Daejeon, Oral Presenter, *Natural Products Anticipation via Chemical Synthesis* (Jun, 2024)
- French-Korean Workshop on Chirality, University of Bordeaux, France, Bordeaux, Participating Speaker, *Natural Products-Inspired Chiral Molecular Photoswitch* (May, 2024)
- Science Touch on Friday, National Research Foundation of Korea, Daejeon, Invited Speaker, *How to Always Succeed in Research* (May, 2024)
- The 133th General Meeting of the Korean Chemical Society, Suwon, Invited Speaker, *Biosynthetically Inspired Synthesis of Complex Natural Products* (Apr, 2024)
- 2024 Spring Convention of Pharmaceutical Society of Korea, Busan, Invited Speaker, *Synthesis of Complex Securinega Alkaloids* (Apr, 2024)

- KAIST, Department of Chemistry, Daejeon, Korea, Departmental Seminar, *Syntheses and Applications of Complex Natural Products* (Apr 2024)
- Brandeis University, Department of Chemistry, Waltham, MA, USA, Invited Departmental Seminar Presentation, *Syntheses of Complex Securinega Alkaloids and Beyond* (Jan, 2024)
- Boston College, Department of Chemistry, Chestnut Hill, MA, USA, Invited Departmental Seminar Presentation, *Synthesis of Complex Securinega Alkaloids and Beyond* (Jan, 2024)
- MIT, Department of Chemistry, Cambridge, MA, USA, BMS Lecturer in the Departmental Seminar, *Syntheses of Complex Securinega Alkaloids* (Jan 2024)
- University of Illinois, Urbana-Champaign, Department of Chemistry, Champaign, IL, USA, Amgen Lecturer Departmental Seminar, *Synthesis of Complex Securinega Alkaloids* (Jan 2024)
- The Scripps Research Institute, Department of Chemistry, La Jolla, CA, USA, Guest Lecturer of the graduate course <Total Synthesis of Natural Products>, *Syntheses of Complex Securinega Alkaloids* (Jan 2024)
- The International Symposium on Catalysis and Fine Chemicals 2023, Tokyo Metropolitan University, Tokyo, Japan, Invited Speaker, *Syntheses of Complex Securinega Alkaloids* (Dec 2023)
- The 47th Heterocyclic Compounds Symposium, Kangwon National University, Chuncheon, Invited Speaker, *Syntheses of Complex Securinega Alkaloids & Beyonds* (Sep 2023)
- Gordon Research Conference, Natural Products and Bioactive Compounds, Proctor Academy, Andover NH, USA, Poster Presentation, *Biosynthetically Inspired Synthesis of Complex Natural Products* (Aug, 2023)
- Kyung Hee University College of Oriental Medicine, ERC Symposium, Invited Speaker, *Chemical Synthesis of Natural Products from Medicinal Plants* (Jun 2023)
- The 21st Symposium on Organic Chemistry: The Next Generation, Aichi Gakuin University, Nagoya, Japan, Invited Speaker, *Synthesis of Complex Securinega Alkaloids* (May 2023)
- UNIST, Department of Chemistry, Invited Seminar Presentation, *Biosynthetically Inspired Synthesis of Complex Natural Products* (May, 2023)
- The 1st Y-KAST International Conference, Jeju Island, Jeju Shinhwa World, Invited Speaker, *Biosynthetically Inspired Synthesis of Complex Natural Products* (Mar, 2023)
- 2023 Pure and Applied Chemistry International Conference, Mae Fah Luang University, Chiang Rai, Thailand, Invited Speaker, *Syntheses of Complex Securinega Alkaloids* (Jan, 2023).
- Chungbuk National University, Cheongju, Korea, Invited Seminar Speaker, *K-Synthesis: Recent Advancement in Natural Products Synthesis Enabled by Unique Methods and Strategies Development from Korea* (Jan 2023).
- The 11th Singapore International Chemistry Conference, Singapore, Invited Speaker, *Syntheses of High-Oxidation State Securinega Alkaloids* (Dec, 2022),
- The 78th Korean Chemical Society Division of Medicinal Chemistry Semina, Invited Seminar Presentation, *Synthesis of High-Oxidation State Securinega Alkaloids* (Nov, 2022)
- LegoChem Biosciences, Invited Seminar Presentation, *Syntheses of Complex Securinega Alkaloids* (Sep, 2022)
- Yale University, Department of Chemistry, Invited Seminar Presentation, *Syntheses of High-Order and High-Oxidation State Securinega Alkaloids* (Aug, 2022)
- Eisai Co., Ltd., Invited Seminar Presentation, *Syntheses of High-Order and High-Oxidation State Securinega Alkaloids* (Jul, 2022)
- Oxford University, Department of Chemistry, Invited Seminar Presentation, *Biosynthetically Inspired/Inspiring Synthesis of Complex Natural Products* (May, 2022)
- The 129th General Meeting of the Korean Chemical Society, IBS Symposium, Invited Presentation, *Synthesis of Flueggeacosine B: From Pd-Catalyzed Cross-Coupling to Cu-Catalyzed Cross-Dehydrogenative Coupling* (Apr, 2022).
- Chungbuk National University, Department of Chemistry, Tutorial Lecture, *2D NMR Assisted Organic Structure Assignment* (Feb, 2022)
- Pacificchem 2021, Strategies and Tactics in Complex Molecule Synthesis, Invited Presentation, Virtual, *Biosynthetically Inspired/Inspiring Synthesis of Complex Natural Products* (Dec. 2022)
- The 24th Korean Society of Organic Synthesis National Meeting, Seoul, Young Scientist Award Seminar, *Synthesis of High-Oxidation State Securinega Alkaloids and Post-Iboga Alkaloids* (Nov, 2021)

- The 128th Korean Chemical Society National Meeting, KAIST-SRC Symposium, Busan, Invited Oral Presentation, *Multiscale Chiral Architectures: A Molecular Level Approach* (Oct, 2021)
- Korea Science Academy, Busan, Seminar Presentation, *How to Always Succeed in Research* (Oct, 2021)
- Gyeonggi Science High School, Suwon, Seminar Presentation, *How to Always Succeed in Research* (May, 2021)
- KAIST, Department of Chemistry, Invited Seminar Presentation, *Biosynthetically Inspired/Inspiring Synthesis of Complex Natural Products* (Mar, 2021)
- The 40th Korean Chemical Society, Division of Organic Chemistry Symposium, Invited Oral Presentation, *Bridging Iboga and Post-Iboga Alkaloids by Chemical Synthesis* (Feb, 2021)
- 2020 Korean Chemical Society Tutorial, Presentation, *Structure Determination of Organic Compounds by 2D-NMR* (Nov. 2020)
- The 20th Korean Chemical Society, Division of Organic Chemistry Summer Workshop, Young Organic Chemist Award Presentation, *Biosynthetically Inspired/Inspiring Syntheses of Complex Natural Products* (Aug, 2020)
- American Chemical Society Fall 2020 Virtual Meeting, Invited Oral Presentation, *Biosynthetically Inspired/Inspiring Synthesis of Complex Natural Products* (Aug, 2020)
- 2020 Academic Young Investigator's (YAS) Symposium, Virtual Meeting, US, Invited Oral Presentation, *Biosynthetically Inspired/Inspiring Synthesis of Complex Natural Products* (Aug, 2020)
- Gordon Research Conference, Heterocyclic Compounds, Salve Regina University, Newport RI, USA, Poster Presentation, *Total Synthesis of Spirocyclic PKS-NRPS-Based Secondary Fungal Metabolites* (Jun, 2019)
- The 9th China-Korea Symposium on Organic Chemistry, Invited Oral Presentation, Kunming, China, *Biosynthetically Inspired/Inspiring Synthesis of Complex Natural Products* (Nov, 2019)
- Ewha Womans University, Department of Chemistry and Nanoscience, Invited Seminar Presentation, *Biosynthetically Inspired/Inspiring Synthesis of Complex Natural Products* (Nov, 2019)
- The 20th Korean Society of Organic Synthesis National Meeting, Invited Oral Presentation, Yongin, *Synthesis of Post-Iboga Alkaloids* (Nov. 2019)
- 2019 Samsung Science and Technology Annual Forum, Invited Oral Presentation, Yongin, *Dimeric Natural Products: A Platform for the Discovery of New Reactivities* (Nov, 2019)
- The 124th Korean Chemical Society National Meeting, Organic Chemistry Symposium II, Changwon, Invited Oral Presentation, *Biosynthetically Inspired Synthesis of Complex Natural Products* (Oct, 2019)
- The 14th International Conference on Cutting-Edge Organic Chemistry in Asia, Niseko Hiton Villages, Niseko, Japan, Invited Oral Presentation, *Synthesis of Post-Iboga Alkaloids* (Sep, 2019)
- POSTECH, Department of Chemistry, Invited Seminar Presentation, *Biosynthetically Inspired Synthesis of Complex Natural Products* (Sep, 2019)
- Korea Science Academy, Busan, Seminar Presentation, *How to Always Succeed in Research* (Mar, 2019)
- The 24th Organic Reactions/Materials Workshop, Daegu, Invited Oral Presentation, *Biomimetic Total Synthesis of Dimeric Epoxyquinoid Natural Products* (Feb. 2019)
- Center for Multiscale Chiral Architecture Workshop, Busan, Oral Presentation, *Synthetic Studies Toward Herquiline A* (Jan, 2019)
- Yonsei University, Department of Chemistry, Invited Seminar Presentation, *Biosynthetically Inspired Syntheses of Complex Natural Products* (Nov, 2018)
- The 18th Tateshina Conference in Organic Chemistry, SkyPark Hotel, Chino, Nagano Prefecture, Japan, Poster Presentation, *Biosynthetically Inspired Transformation of Iboga to Monomeric Post-Iboga Alkaloids* (Nov, 2018)
- 2018 The Asian International Symposium on Organic Chemistry in Tokyo (AISOC2018), University of Tokyo, Tokyo, Japan, Invited Oral Presentation, *Biosynthetically Inspired Transformation of Iboga to Monomeric Post-Iboga Alkaloids* (Nov, 2018)
- Hanyang University, Department of Chemistry, Invited Seminar Presentation, *Biosynthetically Inspired Syntheses of Complex Natural Products* (Oct, 2018)
- Kanazawa University, Department of Chemistry, Invited Seminar Presentation, *Biosynthetically Inspired Syntheses of Complex Natural Products* (Sep, 2018)
- Gordon Research Conference, Natural Products and Bioactive Compounds, Proctor Academy, Andover NH, USA, Poster Presentation, *Synthesis of Post-Iboga Alkaloids* (Aug, 2018)

- 2018 IBS Symposium, Center for Catalytic Hydrocarbon Functionalizations, Daejeon, Invited Oral Presentation, *Biosynthetically Inspired Total Syntheses of Complex Natural Products* (May 2018)
- The 53rd Bürgenstock Conference, Brunnen, Short Talk + Poster Presentation, *Collective Synthesis of Post-Iboga Alkaloids*, (May, 2018)
- Seoul National University, Department of Chemistry, Invited Seminar Presentation, *Biosynthetically Inspired Total Synthesis of Complex Natural Products* (Mar, 2018)
- The 3rd Korean Society of Organic Synthesis, Muju, Organic Synthesis Tutorial Presentation, *2D NMR Spectroscopy in Organic Structure Determination: Version 02* (Feb, 2018)
- The 23rd Organic Reactions/Materials Workshop, Daejeon, Invited Oral Presentation, *Biosynthetically Inspired Synthesis of Complex Alkaloids* (Feb, 2018)
- The 16th Frontiers in Organic Chemistry Workshop, Kyungju, Invited Oral Presentation, *Biosynthetically Inspired Total Syntheses of Complex Alkaloids* (Jan, 2018)
- Post-OMCOS Symposium, Busan, Invited Oral Presentation, *Natural Product: A Source of Inspiration for New Ideas* (Jan, 2018).
- Chonbuk National University, Department of Chemistry, Invited Seminar Presentation, *Biosynthetically Inspired Total Synthesis of Complex Natural Products* (Nov, 2017)
- The 120th Korean Chemical Society Meeting, Organic Symposium III, Gwangju, Invited Oral Presentation, *Biosynthetically Inspired Total Syntheses of Complex Natural Products* (Oct, 2017)
- The 120th Korean Chemical Society Meeting, IBS Symposium, Gwangju, Invited Oral Presentation, *Total Synthesis of PKS-NRPS-Based Fungal Metabolites* (Oct, 2017)
- Pusan National University, Department of Chemistry, BK21 Symposium, Invited Oral Presentation, *Total Synthesis of Spirocyclic PKS-NRPS-Based Fungal Metabolites* (Sep, 2017)
- Korea Science Academy, Busan, Seminar Presentation, *The Art of Organic Synthesis* (Sep, 2017)
- Gyeonggi Science High School, Suwon, Seminar Presentation, *The Art of Organic Synthesis* (Aug, 2017)
- Dana–Farber Cancer Institute, Department of Cancer Biology, Boston, MA, USA, Invited Seminar Presentation, *Getting Hints from Nature: Total Syntheses of Complex Natural Products* (Jul, 2017).
- Gordon Research Conference, Organic Reactions and Processes, Stonehill College, Easton MA, USA, Poster Presentation, *Total Synthesis of Dimeric Securinega Flueggeanine C via an Accelerated Rauhut–Currier Reaction* (Jul, 2017)
- Korea Research Institute of Chemical Technology, Seminar Presentation, *Getting Hints from Nature: Total Syntheses of Complex Natural Products* (Jul, 2017)
- Hong Kong University of Science and Technology, Department of Chemistry, Invited Seminar Presentation, *Biosynthetically Inspired Total Synthesis of Complex Natural Products* (Jul, 2017)
- The 22nd Organic Reactions/Materials Workshop, Gyeongju, Invited Oral Presentation, *Biosynthetically Inspired Total Synthesis of Complex Dimeric Alkaloid* (Feb, 2017)
- The 15th Frontiers in Organic Chemistry Workshop, Gangneung, Invited Oral Presentation, *Biosynthetically Inspired Total Syntheses of Complex Natural Products* (Jan, 2017)
- The 11th International Conference on Cutting-Edge Organic Chemistry in Asia/the 2nd Advanced Research Network on Cutting-Edge Organic Chemistry in Asia, KAIST, Poster Presentation, *Biomimetic Total Synthesis of Oxa-Azaspirononedione-Based Natural Products* (Sep, 2016)
- Chungbuk National University, Department of Chemistry, Tutorial Lecture, *2D NMR Assisted Organic Structure Assignment* (July, 2016)
- Korea University, Department of Chemistry, Invited Seminar Presentation, *Getting Hints from Nature: Total Syntheses of Complex Alkaloids* (June 2016)
- Kyong Hee University, Department of Applied Chemistry, Invited Seminar Presentation, *Total Syntheses of Complex Alkaloids Inspired by Biosynthetic Hypotheses* (Mar, 2016)
- KAIST, Korean Society of Organic Synthesis, Tutorial Lecture, *2D NMR Assisted Organic Structure Assignment* (Feb. 2016)
- Seoul National University, School of Pharmacy, Invited Seminar Presentation, *Total Syntheses of Complex Alkaloids Inspired by Biosynthetic Hypotheses* (Nov, 2015)
- Chonnam National University, Department of Chemistry, Invited Seminar Presentation, *Synthesis and Derivatization of Complex Natural Products* (May, 2015).
- Sogang University, Department of Chemistry, Invited Seminar Presentation, *Synthesis and Derivatization of Complex Natural Products* (Apr, 2015).

- The 235th Korean Chemical Society, Organic Chemistry Division Meeting, Seoul National University, *Synthesis and Derivatization of Complex Natural Products* (Dec, 2014).
- GIST, Department of Chemistry, Invited Seminar Presentation, *Synthesis and Derivatization of Complex Natural Products* (Oct, 2014).
- Chungnam National University, Department of Chemistry, Invited Seminar Presentation, *Synthesis and Derivatization of Complex Natural Products* (Sep, 2014).
- The 39th Heterocycle Symposium, Kangwon National University, Invited Oral Presentation *Synthesis and Derivatization of Complex Natural Products* (Sep, 2014).
- Connecticut Organic Chemistry Symposium Poster Presentation (Mar, 2014).
- Florida State University, Tallahassee, FL, US, Seminar Presentation, *Synthesis and Derivatization of Complex Natural Products* (Jan, 2014).
- Korea Advanced Institute of Science and Technology, Daejeon, Korea, Seminar Presentation, *Synthesis and Derivatization of Complex Natural Products* (Dec, 2013).
- Korea Advanced Institute of Science and Technology, Daejeon, Korea, Seminar Presentation, *Total Syntheses of Complex Natural Products* (Apr, 2012).
- Gordon Research Conference (Natural Products) Poster Presentation (Jul, 2011).
- AstraZeneca Excellence In Chemistry Symposium Poster Presentation (Oct, 2010).
- EMD Serono Science Day Symposium Oral Presentation (Sep, 2010).
- MIT Graduate Research Symposium Oral Presentation (May, 2010).