

Program

November 20 (Mon)

Room A

16:00-16:45 *Opening Ceremony*

Chair: Satoshi Minakata

Opening Remarks/Addresses

16:45-17:00 *IKCOC Prize Ceremony*

Prize Winner: Stuart L. Schreiber

Presenter: Masahiko Yoshida

17:00-18:00 **OL** *Opening Lecture (IKCOC Prize Lecture)*

Stuart L. Schreiber

The Rise of Molecular Glues and Bifunctional Compounds

Chair: Koichi Fukase

18:00-20:00 *Reception (Rooms B and C)*

November 21 (Tue)

Room A

9:00-10:00 **PL-1** **Stephen L. Buchwald**

Pd and Cu Catalysts for C–Heteroatom Bond Formation

Chair: Tamejiro Hiyama

–Coffee Break–

10:30-11:10 **IL-01** **Ilan Marek**

Stereoselective S_N1 at Non-Classical Carbocation

Chair: Hajime Ito

11:10-11:50 **IL-02** **Laurel L. Schafer**

Green Chemistry with Early Transition Metal Complexes. The Catalytic Addition of Amines to Alkenes in Small Molecules and Materials

Chair: Norbert Krause

11:50-12:30 **IL-03** **Masahiro Terada**

Enantioselective Catalysis by Higher Order Organosuperbase

Chair: Toshiaki Murai

–Lunch–

- 14:00-14:40 **IL-04 Matthew S. Sigman**
Data Science Tools for Organic Reaction Development
Chair: Seijiro Matsubara
- 14:40-15:20 **IL-05 François P. Gabbaï**
Sensing and Transporting Anions with Organo-Main-Group Lewis Acids
Chair: Shigehiro Yamaguchi
- 15:20-16:00 **IL-06 Jonathan R. Nitschke**
Organic Molecules in Metal Boxes
Chair: Shuhei Furukawa
- 16:00-16:40 **IL-07 Kenichiro Itami**
Molecular Nanocarbon Synthesis and Beyond
Chair: Takashi Kubo

Room B

Chair: Aiko Fukazawa

- 10:30-10:45 **OP-01 Yumi Yakiyama, Hidehiro Sakurai**
Bowl and Butterfly-like Shape Effects on the Formation and the Property of
Molecular Crystalline Materials
- 10:45-11:00 **OP-02 Takumi Nakazato, Haruka Takekoshi, Takahiro Sakurai,
Hiroshi Shinokubo, Yoshihiro Miyake**
N-Coordination and Methylation of 2,7-Diazapyrenes
- 11:00-11:15 **OP-03 Tsuyoshi Nishikawa, Makoto Ouchi**
Chain-Growth Polymerization of Vinylboronic Acid Derivatives:
Boron as a Replaceable Side Chain for Overcoming the Limitation
in Polymer Synthesis
- 11:15-11:30 **OP-04 Fumitaka Ishiwari**
Efficient Synthesis and Gas Absorption/Separation Properties of
Diazacyclooctane-Containing Ladder Polymers
- Chair: Akihiro Orita*
- 11:30-11:45 **OP-05 Daiki Shimizu, Hikaru Sotome, Hiroshi Miyasaka, Kenji Matsuda**
Optically Distinguishable Electronic Spin Isomers Based on a Stable
Organic Diradical
- 11:45-12:00 **OP-06 Tomohiko Nishiuchi**
Mechano-stimuli-responsive Biradical Composed of Anthracene-Based
 π -Cluster
- 12:00-12:15 **OP-07 Yosuke Tani, Kiyoshi Miyata, Erika Ou, Yuya Oshima, Mao Komura,
Morihisa Terasaki, Shuji Kimura, Takumi Ehara, Koki Kubo,
Ken Onda, Takuji Ogawa**
Organic 1,2-Diketones for Fast, Efficient, Narrowband Organic
Room-Temperature Phosphorescence in Solution

12:15-12:30 **OP-08** Masayuki Gon, Kazuo Tanaka

Synthesis and Evaluation of π -Conjugated Systems Based on Hypervalent Compounds

–Lunch–

Chair: Hiroki Oguri

14:00-14:15 **OP-09** Hirofumi Ueda, Kosuke Okada, Ken-ichi Ojima, Hidetoshi Tokuyama

Total Syntheses of (+)-Pleiocarpamine, (+)-Voacalgine A, and (+)-Bipleiophylline

14:15-14:30 **OP-10** Chihiro Tsukano, Hidetaka Kuroiwa, Soichiro Suzuki, Kazuhiro Irie

Total Synthesis and Structure Revision of (+)-Lancilactone C

14:30-14:45 **OP-11** Dawen Niu

Radical Pathway Glycosylation

14:45-15:00 **OP-12** Takanori Matsumaru, Kana Okubo, Kasumi Sakuratani, Kodai Sueyoshi, Shusuke Fujii, Juri Takayama, Sho Yamasaki, Yukari Fujimoto

Glycolipid Ligands of C-Type Lectin Receptor Mincle; Synthesis and Biological Functions

15:00-15:15 **OP-13** Atsushi Shimoyama, Haruki Yamaura, Koichi Fukase

Synthesis and Functions of Acetic Acid Bacteria *Acetobacter pasteurianus* Lipid A

Chair: Fumitoshi Kakiuchi

15:15-15:30 **OP-14** Akira Yada

Machine Learning Approach for Predicting Catalytic Activity Accounting for Reaction Time

15:30-15:45 **OP-15** Gavin Chit Tsui

Stereoselective Palladium-Catalyzed C–F Bond Activation of *gem*-Difluoroalkenes for Multifarious C–C and C–Heteroatom Bond Construction

15:45-16:00 **OP-16** Koji Kubota, Tamae Seo, Hajime Ito

Development of High-Performance Phosphine Ligands for Mechanochemical Suzuki-Miyaura Cross-Coupling Reactions

16:00-16:15 **OP-17** Yasushi Nishihara

Nickel or Palladium-Catalyzed Decarbonylative Transformations of Acyl Halides

16:15-16:30 **OP-18** Hayato Tsurugi, Kohei Nishi, Kazushi Mashima

Low-Valent Chromium-Catalyzed Ring-opening Arylation of 7-Oxabenzonorbornadiene Derivatives with Aryl Grignard Reagents

16:40-18:40 Poster Session A (Room C, Room D and Room E)
PA(C)-01–PA(C)-84 (Room C)
PA(D)-01–PA(D)-46 (Room D)
PA(E)-01–PA(E)-57 (Room E)

November 22 (Wed)

Room A

9:00-10:00 **PL-2 E.W. “Bert” Meijer**

Non-Covalent Synthesis of Supramolecular Systems and Materials

Chair: Takuzo Aida

–Coffee Break–

10:30-11:10 **IL-08 Stefan Hecht**

Illuminating Materials, Devices, and Manufacturing with Photoswitches

Chair: Kenji Matsuda

11:10-11:50 **IL-09 Yan Xia**

May the Force Be With the Molecules: Designing Force-Induced Molecular Reactivities and Adaptive Materials

Chair: Makoto Ouchi

11:50-12:30 **IL-10 Tanja Weil**

Synthesis of Peptide Nanostructures in Living Systems

Chair: Keiji Numata

–Lunch–

14:00-14:40 **IL-11 Thomas R. Ward**

Artificial Metalloenzymes for *in vivo* Catalysis: Challenges and Opportunities

Chair: Takashi Hayashi

14:40-15:20 **IL-12 Richmond Sarpong**

Break-it-to-Make-it Strategies for Chemical Synthesis Inspired by Complex Natural Products

Chair: Satoshi Yokoshima

15:20-16:00 **IL-13 John L. Wood**

Recent Progress in the Total Synthesis of Natural Products

Chair: Hidetoshi Tokuyama

Chair: Richmond Sarpong

- 16:00-16:15 **OP-35** Tohru Oishi, Yuma Wakamiya, Yusuke Mita, Yuki Yamashita, Yoko Yasuno
Total Synthesis and Structure-Activity Relationship Study of Amphidinol 3
- 16:15-16:30 **OP-36** Toshiaki Wayama, Gavin Tay, Soushi Nishimura, Hiroki Oguri
Biogenetically Inspired Syntheses of Alkaloidal Scaffolds through Activation of Dihydropyridines

Room B

Chair: Naohiko Yoshikai

- 10:30-10:45 **OP-19** Kei Muto, Yota Uwabe, Junichiro Yamaguchi
Catalytic Dearomative Azaspirocyclization of Bromoarenes with *N*-Tosylhydrazones and Synthesis of *Cephalotaxus* Alkaloids
- 10:45-11:00 **OP-20** Sobi Asako, Yushu Jin, Boobalan Ramadoss, Laurean Ilies
Spirobipyridine Enables Remote Steric Control and Rate Acceleration in Iridium-Catalyzed Aromatic C–H Borylation
- 11:00-11:15 **OP-21** Tsuyoshi Mita, Yong You, Wataru Kanna, Hideaki Takano, Hiroki Hayashi, Satoshi Maeda
Electrochemical Dearomative Carboxylation of (Hetero)aromatics with CO₂
- 11:15-11:30 **OP-22** Hiroshi Naka, Moeko Itoga, Masako Yamanishi, Taro Udagawa, Ayane Kobayashi, Keiko Maekawa, Yoshiji Takemoto
Iridium-Catalyzed α -Selective Hydrogen–Deuterium Isotope Exchange of Alcohols

Chair: Gavin Chit Tsui

- 11:30-11:45 **OP-23** Takanori Iwasaki, Kazuki Tsuge, Naoki Naito, Kyoko Nozaki
Chemoselectivity Change in Catalytic Hydrogenolysis: Ureas to Formamides and Amines
- 11:45-12:00 **OP-24** Zhongxing Huang
Access Molecular Complexity by Breaking Symmetry of Dicarbonyl Compounds
- 12:00-12:15 **OP-25** Masamichi Ogasawara
Enantioselective Synthesis of Planar-Chiral Ferrocene Derivatives by Asymmetric Metathesis Dimerization of Vinylferrocenes
- 12:15-12:30 **OP-26** Toshimichi Ohmura, Kaito Yagi, Satoshi Kusaka, Yunhao Song, Michinori Suginome
Iridium-Catalyzed Dehydrogenative Cyclization: Use of Simple Alkyl Groups in Construction of *N*- and *O*-Heterocycles

–Lunch–

Chair: Yasushi Nishihara

- 14:00-14:15 **OP-27** **Chisaki Arakawa, Kazuya Kanemoto, Katsuya Nakai, Chen Wang, Shunya Morohashi, Eunsang Kwon, Shingo Ito, Naohiko Yoshikai**
Carboiodanation of Arynes: Organoiodine(III) Compounds as Nucleophilic Organometalloids
- 14:15-14:30 **OP-28** **Kensuke Kiyokawa, Daichi Okumatsu, Manabu Abe, Satoshi Minakata**
Photo-Induced Radical Carboamination of Styrenes with Carboxylic Acids and (Diarylmethylene)aminobenziodoxolones
- 14:30-14:45 **OP-29** **Sena Toyofuku, Gen Onodera, Tsutomu Fukuda, Masanari Kimura**
Stereoselective Synthetic Method Using Cu-Catalyzed Coupling Reaction of Alkynylborates and Aldehydes
- 14:45-15:00 **OP-30** **Fumitoshi Shibahara, Mayu Suganuma, Takuya Sonoda**
Imidazo[1,5-*a*]pyridylidene Ligands for π -Acidic Catalyst
- 15:00-15:15 **OP-31** **Zhi-Bin Li, Chia-Chi Lin, Yu-Chieh Chen, Chin-Chau Chen, Xin-Cheng Li, Ming-Jung Wu**
Electronic Effects on the Cyclization Reactions of Arene-1,2-diyne

Chair: Ken Kamikawa

- 15:15-15:30 **OP-32** **Itaru Nakamura, Hiroki Tashiro, Keiryu Kubota, Masahiro Terada**
 π -Lewis Acidic Metal-Catalyzed Reactions via N-S bond Cleavage
- 15:30-15:45 **OP-33** **Nobukazu Taniguchi, Kenji Kitayama**
Zinc-Catalyzed Regioselective Hydrothiolation of Alkenes by Using Thiols
- 15:45-16:00 **OP-34** **Yoshihiro Sohtome, Mikiko Sodeoka**
Dynamics in Ni(II)-Catalyzed Diastereoconvergent (3 + 2) Cycloaddition of α -Ketoester Enolates with *C*-CN Nitrones
- 16:00-16:15 **OP-37** **Jen-Chieh Hsieh**
Denitrogenative Transannulation Reactions of 1,2,3,4-Benzothiaziazin-1,1(2*H*)-dioxides with Arynes to Synthesize Biaryl Sultams
- 16:15-16:30 **OP-38** **Masato Ohashi, Kota Ando, Shoichi Murakami, Kenichi Michigami, Sensuke Ogoshi**
N-Heterocyclic Carbenes with Polyfluorinated Groups at the 4- and 5-Positions from [3 + 2] Cycloadditions between Formamidinates and *cis*-1,2-Difluoroalkene Derivatives
- 16:40-18:40 Poster Session B (Room C, Room D and Room E)
PB(C)-01–PB(C)-85 (Room C)
PB(D)-01–PB(D)-46 (Room D)
PB(E)-01–PB(E)-53 (Room E)

November 23 (Thu)

Room A

- 9:00-9:40 **IL-14 Paolo Melchiorre**
Photochemistry & Organocatalysis: New Radical Opportunities
Chair: Takashi Ooi
- 9:40-10:20 **IL-15 Thorsten Bach**
Catalytic Photochemical Deracemization Reactions
Chair: Masahiro Terada
- Chair: Mamoru Tobisu*
- 10:20-10:35 **OP-45 Naoki Ishida**, Tairin Kawasaki, Masahiro Murakami
Dehydrogenative Coupling of Alkylamines with Primary Alcohols Forming α -Amino Ketones with Liberation of H₂
- 10:35-10:50 **OP-46 Kai Chen, Yunzhi Lin, Wenqiang Wu, Hang Shi**
Transition-Metal-Catalyzed Arene Functionalization via π -Coordination
- 10:50-11:05 **OP-47 Junqiang Wei, Ivan Keng Wee On, Mingfeng Li, Ye Zhu**
Ionic Ligand-Substrate Interactions Enable Electrostatic Catalysis: Long-Range Stereocontrol in Palladium-Catalyzed Cross-Coupling Reactions
- 11:05-11:20 **OP-48 Shunsuke Onodera, Soya Ishikawa, Ryo Togashi, Ryosuke Ueda, Takuya Kochi, Fumitoshi Kakiuchi**
Chelation-Assisted Rhodium-Catalyzed Alkenylation and Alkylation of Allylbenzene and Styrene Derivatives via C–C Bond Cleavage
- 11:20-11:35 **OP-49 Timothée Cadart, Martin Kotora**
Synthesis of [5], [7], and [9]Helical Indenofluorenes: Asymmetric Induction, Applications, and Mechanistic Aspects
- 11:35-11:50 **OP-50 Ken Kamikawa, Ayaka Yubuta, Shun Nakayama, Akihiro Tsurusaki**
Asymmetric Synthesis of Non-Central Chiral Molecules Using Aryne Intermediates
- Lunch–
- 13:10-13:50 **IL-16 Zhen Xi**
Genome Therapy: A New Approach for Tumor Growth Inhibition
Chair: Hiroshi Sugiyama
- 13:50-14:30 **IL-17 Shang-Cheng Hung**
“One-pot Strategies” for Synthesis of Carbohydrates and their Bioevaluations
Chair: Yukari Fujimoto

–Coffee Break–

15:00-16:00 **PL-3 Mikiko Sodeoka**
Development of Chemical Methods for Imaging and Target Identification
Chair: Itaru Hamachi

16:00-16:15 **Closing Remarks**

Room B

Chair: Hiroshi Shinokubo

9:00-9:15 **OP-39 Rui Shang, Eiichi Nakamura**
Iron-Catalyzed New Reactions and Their Application for Electronic Materials

9:15-9:30 **OP-40 Masahito Murai**
Alignment of Azulene-Based Cationic π -Skeletons toward Functional π -Materials

9:30-9:45 **OP-41 Marie-Aude Hiebel**
Mild and Versatile Synthesis of Polynitrogen Containing Tricyclic 6-5-5 and 6-5-6 Derivatives and their Fluorescent Properties

Chair: Tadashi Ema

9:45-10:00 **OP-42 Akiko Yagi, Takaku Yoshihara, Yoshifumi Toyama, Miyuka Ogawa, Hiroki Shudo, Hideto Ito, Kenichiro Itami**
Adamantane-Annulation to Arenes: A Strategy for Property Modulation of Aromatic π -Systems

10:00-10:15 **OP-43 Akihiro Shimizu, Shinobu Arikawa, Daisuke Shiomi, Kazunobu Sato, Takeji Takui, Hikaru Sotome, Hiroshi Miyasaka, Masahito Murai, Shigehiro Yamaguchi, Ryo Shintani**
Near-Infrared Fluorescent Hydrocarbon-Based Triplet Diradical Cation

10:15-10:30 **OP-44 Amit K. Jaiswal, Priya Saha, Kimichi Suzuki, Anna Jasny, Bernd M. Schmidt, Satoshi Maeda, Stefan Hecht, Dennis Chung-Yang Huang**
Construction of Functionalized Red-Light Photoswitches by Selective Copper-Catalyzed Indigo *N*-Arylation

Chair: Tomonori Tamura

10:30-10:45 **OP-51 Jie Sheng, Kelly Koh Kar Yun, Zhaoyang Li, Qi Shi, Ruyi Zhu**
Towards Enzyme-Like DNA Catalysts for Asymmetric Catalysis

10:45-11:00 **OP-52 Kazuya Kanemoto, Haruka Machida, Naohiko Yoshikai**
Cu-Catalyzed [3+2] Cycloaddition for the *N*-Terminal-Specific Modification of Peptides

- 11:00-11:15 **OP-53** Anuchit Phanumartwiwath, Chatchai Kesornpun,
Daranee Chokchaichamnankit, Amnart Khongmanee,
Penchatr Diskul-Na-Ayudthaya, Theetat Ruangjaroon,
Chantragan Srisomsap, Prasat Kittakoop, Jisnuson Svasti,
Somsak Ruchirawat
Nitrile Oxide Chemistry Cycloaddition Approach for Protein Bioconjugation
and Apoptotic Detection
- 11:15-11:30 **OP-54** Koji Miki, Masahiro Oe, Kanae Suzuki, Huiying Mu, Kouichi Ohe
Turn-on Fluorescent Probes for Cancer Stem Cell-Specific Visualization
- 11:30-11:45 **OP-55** Kazuma Amaike, Erika Kato, Miu Fukatsu, Dominik Zetschok,
Luca Hagemeyer, Atsushi Usami, Hayato Yamada, Kenichiro Itami
Nucleic Acid Delivery Using Cationic Polycyclic Aromatic Hydrocarbons

–Lunch–

Chair: Masamichi Ogasawara

- 13:15-13:30 **OP-56** Mario Waser
Chiral Isothio(seleno)urea-Catalyzed Activation of Allenolates
- 13:30-13:45 **OP-57** Seiji Shirakawa, Ryuichi Nishiyori, Taiki Mori
Asymmetric CO₂ Utilization Reaction via Chiral Bifunctional
Chalcogenide-Catalyzed Bromocyclizations
- 13:45-14:00 **OP-58** Muhammet Uyanik, Takehiro Kato, Naoto Sahara, Sho Akagawa,
Kazuaki Ishihara
Oxidative Dearomative Coupling of Low-Reactive Arenols Using
Hypohalite Catalysis
- 14:00-14:15 **OP-59** Franz-Lucas Haut, Riccardo S. Mega, Joan V. Estornell, Ruben Martín
Sulfinate-Catalyzed, Intramolecular C(sp³)-C(sp³) Fragment Coupling via
CO₂-Extrusion
- 14:15-14:30 **OP-60** Akira Matsumoto, Natsumi Maeda, and Keiji Maruoka
Modular Synthesis of 1,4-Dicarbonyl Compounds via Sequential
Photocatalysis Using Ambiphilic Radical Linchpin

–Coffee Break–

18:30-20:30 *Banquet (Room A)*