

Program

November 9 (Mon)

Room A

16:00-16:30 *Opening Ceremony*

Chair: Koichi Fukase

Opening Remarks/Addresses

16:30-16:45 *IKCOC Prize Ceremony*

Prize Winner: Dieter Seebach

Presenter: Zen-ichi Yoshida

16:45-17:45 **OL** *Opening Lecture (IKCOC Prize Lecture)*

Dieter Seebach

From Total Synthesis to New Vesicle- and Cell-Penetrating Peptides

Chair: Keisuke Suzuki

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

November 10 (Tue)

Room A

9:00-10:00 **PL-1** **Alois Fürstner**

Catalytic Activation of π -Bonds: Novel Concepts and Applications

Chair: Naoto Chatani

–Coffee Break–

10:30-11:10 **IL-01** **Tehshik P. Yoon**

Photocatalysis with Visible Light

Chair: Munetaka Akita

11:10-11:50 **IL-02** **Jin-Quan Yu**

Ligand-Accelerated C-H Activation Reactions: Near and Far

Chair: Masahiro Miura

11:50-12:30 **IL-03** **Karl Anker Jørgensen**

Asymmetric Organocatalysis as a Toolbox for Diversity-Oriented Synthesis

Chair: Martin Kotora

–Lunch–

14:00-14:40 **IL-04 Terunori Fujita**
Development of New Olefin Insertion Catalysts and the Formation of
Value-Added Olefin-Based Materials
Chair: Kazushi Mashima

14:40-15:20 **IL-05 Luisa De Cola**
Dynamic Stimulus Responsive Systems
Chair: Atsuhiko Osuka

15:20-16:00 **IL-06 Colin Nuckolls**
From Molecules to Materials
Chair: Kenji Matsuda

16:00-16:40 **IL-07 Soo Young Park**
Designing Innovative Materials for Molecular and Supramolecular
Optoelectronics
Chair: Hajime Ito

Room B

Chair: Hidehiro Sakurai

10:30-10:45 **OP-01 Hayato Tsuji, Eiichi Nakamura**
Remarkable Optical and Electronic Properties of Carbon-Bridged
Oligo(phenylenevinylene)s

10:45-11:00 **OP-02 Yousuke Ooyama, Takehiro Yamada, Joji Ohshita**
Type-II Dye-Sensitized Solar Cells Based on D- π -Catechol Dye Sensitizers

11:00-11:15 **OP-03 Jun Terao, Hiroshi Masai, Takuro Hosomi, Tetsuaki Fujihara,
Yasushi Tsuji**
Syntheses and Physical Properties of Functionalized Insulated Molecular
Wires

11:15-11:30 **OP-04 Keiji Hirose, Shota Umezaki, Ryohei Kano, Philip G. Young,
Yoshito Tobe**
Elucidation of Molecular Design Guide for Rotaxane Type Molecular
Machines Focusing on Shuttling Dynamics

Chair: Masaki Shimizu

11:30-11:45 **OP-05 Keigo Imamura, Thi Hien Thuy Nguyen, Chaolu Eerdun,
Jun-ichiro Setsune**
Oligopyrrole Helicates: Stereochemistry, Chiroptical Properties, and Redox
Activity

11:45-12:00 **OP-06 Yumi Yakiyama, Koo Jin Young, Lee Gil Ryeong, Masaki Kawano**
Azaphenalenenes: Effective Building Block for Unique Molecular Assemblies

12:00-12:15 **OP-07 Masaki Yamamura, Tatsuya Nabeshima**
Bowl-Shaped Hosts Containing a Phosphorus Atom and Encapsulation of
C₆₀ Fullerene Based on Concave/Convex Interaction

12:15-12:30 **OP-08** **Toshiaki Murai, Tomohiko Mizutani, Hiroaki Kubuki, Akihito Yoshida, Fumitoshi Shibahara**
Synthesis and Properties of Selenocarbonyls Substituted with Nitrogen- and Oxygen-Containing Substituents

–Lunch–

Chair: Hiromichi Fujioka

14:00-14:15 **OP-09** **Thibault Alle, Mehdi Makrrougras, Marine Soulard, Cyrille Sabot, Stéphane Leleu, Xavier Franck**
Synthesis of Fluorescent or Bioactive Azaphilones

14:15-14:30 **OP-10** **Koji Miki, Tatsuhiro Inoue, Fumio Yamauchi, Tetsuya Yano, Kouichi Ohe**
Near-Infrared Dye-Grafted Amphiphilic Hyaluronic Acid Derivatives for Optical and Photoacoustic Tumor Imaging

14:30-14:45 **OP-11** **Masayuki Izumi, Hiroyuki Araki, Mamiko Tominaga, Ryo Okamoto, Yasuhiro Kajihara**
Chemical Synthesis of Ubiquitinated Glycoprotein CCL1 for Analysis of Glycoprotein Degradation

Chair: Masahisa Nakada

14:45-15:00 **OP-12** **Takeshi Yamada, Tetsuya Ideguchi, Tomoyasu Hirose, Tatsuya Shirahata, Rei Hokari, Aki Ishiyama, Masato Iwatsuki, Akihiro Sugawara, Yoshinori Kobayashi, Kazuhiko Otoguro, Satoshi Ōmura, Toshiaki Sunazuka**
Total Synthesis of Indole Alkaloids Containing an Indoline Spiroaminal Framework

15:00-15:15 **OP-13** **Yoshihiro Ueda, Takumi Furuta, Takeo Kawabata**
Final-Stage Site-Selective Acylation for Total Syntheses of Multifidosides A-C by Organocatalysis

15:15-15:30 **OP-14** **Punlop Kuntiyong, Pijitra Bunrod, Chanumas Sae-guay**
A Divergent Synthetic Strategy for Erythrina, Indolizidine and Quinolizidine Alkaloids

15:30-15:45 **OP-15** **Masayasu Taki, Hiroaki Ogasawara, Hiroshi Osaki, Aiko Fukazawa, Yoshikatsu Sato, Kimi Ogasawara, Tetsuya Higashiyama, Shigehiro Yamaguchi**
Benzophosphole Oxide-Based Fluorescent Probe for the Detection of Intracellular Sodium Ion

Chair: Nobuaki Kambe

15:45-16:00 **OP-16** **Fumitoshi Kakiuchi, Yusuke Hara, Shunsuke Onodera, Takuya Kochi**
Rhodium-Catalyzed α -Acylalkylation of Aromatic C–H with Cyclic Alkenyl Carbonates and One-Pot Synthesis of Isocoumarins

- 16:00-16:15 **OP-17** Fumitoshi Shibahara, Masafumi Suzuki, Saki Kubota, Toshiaki Murai
Synthesis of Polycyclic Amines via Stereoselective Seleno-Claisen
Rearrangement
- 16:15-16:30 **OP-18** Yoichiro Kuninobu, Haruka Ida, Mitsumi Nishi, Motomu Kanai
Hydrogen Bond-Controlled *meta*-Selective C-H Borylation of Aromatic
Compounds
- 16:40-18:40 Poster Session 1 (Room C and Room D)
PA(C)-01–PA(C)-73 (Room C)
PA(D)-01–PA(D)-38 (Room D)
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November 11 (Wed)

Room A

- 9:00-9:40 **IL-08** **Huw M. L. Davies**
Collaborative Approach for C–H Functionalization
Chair: Kenichiro Itami
- 9:40-10:20 **IL-09** **Keisuke Suzuki**
Lessons from Total Synthesis of Hybrid Natural Products
Chair: Norbert Krause
- 10:20-11:00 **IL-10** **Jianbo Wang**
Recent Advance in Carbene-Based Coupling Reactions
Chair: Michinori Suginome

–Coffee Break–

Room B

- Chair: Fumi Nagatsugi*
- 9:00-9:15 **OP-19** **Pavel B. Drašar**
Matrix Assisted Supramolecular Chirality Amplification with Natural
Products Synthons
- 9:15-9:30 **OP-20** Junko Ohkanda, Prakash Parvatkar, Motonari Uesugi, Nobuo Kato
Intracellular Generation of Diterpene-Peptide Conjugate that Inhibits 14-3-3
Interactions
- 9:30-9:45 **OP-21** Yoshio Hisaeda, Kosuke Wakiya, Toshikazu Ono, Takahiro Masuko,
Hisashi Shimakoshi
Bioinspired Catalysts with Vitamin B₁₂ Functions
- 9:45-10:00 **OP-22** Atsushi Shimoyama, Keisuke Mizote, Yukari Fujimoto, Koichi Fukase
Synthesis and Bio-Functional Studies of Immunomodulating LPS Partial
Structures

Chair: Takashi Kubo

- 10:00-10:15 **OP-23** **Hiroshi Ikeda, Atsushi Sakai, Eisuke Ohta, Yuichi Yoshimoto, Yasunori Matsui**
Fluorescence Properties of Diaroylmethanatoboron Difluorides Depend on Crystal-Packing Structure Governed by Geometry of Substituents
- 10:15-10:30 **OP-24** **Yasushi Yokoyama, Koichi Kawamura, Ken Osawa, Yuta Watanobe, Naoki Maruyama**
HSA: Natural Template for Enantioselective Photochromic Reactions in Artificial Media
- 10:30-10:45 **OP-25** **Shohei Kato, Yuma Serizawa, Daisuke Sakamaki, Shu Seki, Yoshihiro Miyake, Hiroshi Shinokubo**
Diversity-Oriented Synthesis of Tetrathia[8]circulenes by C–H Borylation and Annulation
- 10:45-11:00 **OP-26** **Koichi Mitsudo, Natsuyo Kamimoto, Hidehiko Sato, Arata Yamasaki, Jun Goto, Seiji Suga**
Synthesis of Ethene-Bridged Terthiophenes by Double Sonogashira Coupling of Dibromoterthiophene and Sequential Double Cyclization

–Coffee Break–

- 11:30-13:30 Poster Session 2 (Room C and Room D)
PB(C)-01–PB(C)-72 (Room C)
PB(D)-01–PB(D)-36 (Room D)

–Lunch–

- 14:00-17:30 *–Excursion–*

- 18:30-20:30 ***Mixer for Younger Participants (Room B)***

November 12 (Thu)

Room A

- 9:00-10:00 **PL-2** **Susumu Kitagawa**
Evolution of Functions of Porous Coordination Polymers/Metal-Organic Frameworks
Chair: Yoshito Tobe

–Coffee Break–

- 10:30-11:10 **IL-11 Alan E. Rowan**
Catalysis and Motion. Threading of Nanocages onto Polymer Threads
Chair: Tatsuya Nabeshima
- 11:10-11:50 **IL-12 Christian Funke**
Preparation of Modern Agrochemicals - Simple, Safe and Cost Effective
Chair: Kenji Tsubata
- 11:50-12:30 **IL-13 Tobias Ritter**
Late-Stage Fluorination for PET Imaging
Chair: Sensuke Ogoshi
- Lunch–
- 13:45-14:25 **IL-14 Kai Johnsson**
Fluorescent and Bioluminescent Probes for Biology and Medicine
Chair: Itaru Hamachi
- 14:25-15:05 **IL-15 Eric Meggers**
New Avenues for the Design of Asymmetric Catalysts
Chair: Masahiro Terada
- Coffee Break–
- Chair: Motomu Kanai*
- 15:30-15:45 **OP-40 Norbert Krause**
Sustainable Gold Catalysis: Synthesis of New Spiroacetals
- 15:45-16:00 **OP-41 Masahiro Terada, Yusuke Ota, Feng Li, Yasunori Toda, Azusa Kondoh**
Enantio-Convergent Nucleophilic Substitution Reaction of Racemic
Alkyne-Cobalt Complex Catalyzed by Chiral Brønsted Acid: Asymmetric
Synthesis of Enantio-Enriched Thioethers
- 16:00-16:15 **OP-42 Vakhid A. Mamedov**
Two New Rearrangements of Functionalized Quinoxalinones towards
Benzimidazoles and Benzimidazolones
- 16:15-16:30 **OP-43 Hajime Ito**
Mechanical- and Photo-Induced Single-Crystal-to-Single-Crystal
Transformations of Gold(I) Complexes
- 16:30-16:45 **OP-44 Takamitsu Hosoya, Yasutomo Hatakeyama, Fumika Karaki,
Kohei Johmoto, Hidehiro Uekusa, Suguru Yoshida**
Transient Protection of Strained Alkynes from Click Reaction via
Complexation with Copper

Room B

Chair: Ming-Chang Yeh

- 10:30-10:45 **OP-27** **Takuya Kochi, Taro Hamasaki, Kazuya Ichinose, Fumitoshi Kakiuchi**
Palladium-Catalyzed Cycloisomerization and Hydrosilylation/Cyclization of 1,n-Dienes via Chain Walking
- 10:45-11:00 **OP-28** **Petr Koukal, Jan Ulč, David Nečas, Martin Kotora**
Natural Compounds Synthesis by Organocatalytic Enantioselective Allylation of Aldehydes
- 11:00-11:15 **OP-29** **Kazutaka Shibatomi, Kazumasa Kitahara, Takuya Okimi, Yoshiyuki Abe, Seiji Iwasa**
Development of New Chiral Primary Amine Catalyst and Its Application to the Enantioselective Halogenation of α -Branched Aldehydes
- 11:15-11:30 **OP-30** **Hayato Tsurugi, Mitali Paul, Satoru Shirase, Laurent Mathey, Murugesapandian Balasubramanian, Shinji Tanaka, Kazushi Mashima**
Cerium-Catalyzed Oxidation of Arylmethanols under Atmospheric Pressure of Dioxygen

Chair: Masato Kitamura

- 11:30-11:45 **OP-31** **Kenosuke Itoh, Ryo Kato, Daito Kinugawa, Hideaki Kamiya, Ryuki Kudo, Masayuki Hasegawa, Hideaki Fujii, Hiroyuki Suga**
Photochemically-Induced C-C Bond Formation between Tertiary Amines and Nitrones
- 11:45-12:00 **OP-32** **Jean-Ho Chu, Shih-Tien Chen, Meng-Fan Chiang, Ming-Jung Wu**
Palladium-Catalyzed Direct *Ortho* Aroylation of 2-Phenoxy pyridines with Aldehydes and Catalytic Mechanism Investigation
- 12:00-12:15 **OP-33** **Shoko Yamazaki, Mamiko Niina, Taku Naito, Kiyomi Kakiuchi**
Lewis Acid-Catalyzed Cyclization Reactions of Amides of Ethenetricarboxylates
- 12:15-12:30 **OP-34** **Kazuhiko Semba, Yoshiaki Nakao**
Arylboration of Alkenes by Cooperative Pd/Cu Catalysis

–Lunch–

Chair: Yoshihiro Sato

- 13:45-14:00 **OP-35** **Hongming Li, Kevin M. Belyk, Yi Ning Ji Chen, Jingjun Yin, Qinghao Chen, Alan Hyde, Matthew Tudge, Louis-Charles Campeau, Kevin Campos**
Enantioselective Synthesis of Hemiaminals via Pd-Catalyzed C-N Coupling
- 14:00-14:15 **OP-36** **Jun Ishihara, Shino Nakadachi, Yuki Watanabe, Susumi Hatakeyama**
Lewis Acid Template-Catalyzed Asymmetric Diels-Alder Reaction
- 14:15-14:30 **OP-37** **Koji Hirano, Riko Odani, Akihiro Nakatani, Masahiro Miura**
Metal-Promoted Site-Selective C-H Functionalization of 2-Pyridones
- 14:30-14:45 **OP-38** **Biao Guo, Ruimao Hua**
Strategy for Construction of Chrysenes

14:45-15:00 **OP-39** **Masamichi Ogasawara, Ryohsuke Ikehata, Ya-Yi Tseng, Wei-Yi Wu, Rie Takahashi, Sachie Arae, Tamotsu Takahashi, Ken Kamikawa**
Catalytic Enantioselective Synthesis of *P*-Stereogenic Phosphine Derivatives by Mo-Catalyzed Asymmetric Ring-Closing Metathesis on (π -Arene)chromium Platform

–Coffee Break–

Chair: Yasuhiro Uozumi

15:30-15:45 **OP-45** **Akio Saito, Yukino Shinomoto, Akira Yoshimura, Viktor V. Zhdankin**
TBAI-Catalyzed C-H Azidation of Aldehydes with Thermally Stable Azidobenziodoxolone

15:45-16:00 **OP-46** **Nobukazu Taniguchi**
Nickel-Catalyzed Hydroxysulfonylation of Alkenes Using Sodium Sulfinates in Air

16:00-16:15 **OP-47** **Toshiki Nokami, Yuta Isoda, Norihiko Sasaki, Toshiyuki Itoh, Ryutaro Hayashi, Akihiro Shimizu, Jun-ichi Yoshida**
Automated Electrochemical Assembly of Oligosaccharides

16:15-16:30 **OP-48** **Ryoichi Kuwano, Ryuhei Ikeda, Yusuke Makida**
Enantioselective Hydrogenation of Carbocyclic Arenes

16:30-16:45 **OP-49** **Jen-Chieh Hsieh**
Synthesis of Phenanthridines and Phenanthridinones via the Transformation of Nitrile

16:45-18:45 Poster Session 3 (Room C and Room D)
PC(C)-01–PC(C)-72 (Room C)
PC(D)-01–PC(D)-38 (Room D)

19:00-21:00 *Banquet (Room A)*

November 13 (Fri)

Room A

9:00-9:40 **IL-16** **Douglas W. Stephan**
Main Group Catalysis: New Strategies for Reactivity
Chair: Shigehiro Yamaguchi

9:40-10:20 **IL-17** **Andrew D. Hamilton**
Synthetic Mimics of Protein Secondary Structure and Function
Chair: Tohru Fukuyama

10:20-11:00 **IL-18 Hiroshi Sugiyama**
Chemical Biology of Nucleic Acids: DNA Origami and Artificial Genetic Switch
Chair: Yukari Fujimoto

–Coffee Break–

11:30-12:30 **PL-3 Larry E. Overman**
Bimolecular Free-Radical Reactions in Fragment Coupling
Chair: Koichi Fukase

12:30-13:00 *Closing Remarks*

Room B

Chair: Kazuhiko Takai

9:00-9:15 **OP-50 Hiroyuki Kusama, Kento Ishida, Kenichi Ichikawa, Junpei Sato, Minoru Adegawa, Satoshi Tadami, Takemi Mizuno, Nobuharu Iwasawa, Manabu Abe**
[3+2]-Cycloaddition Reaction of Quinolinium Ylides Derived from Photochemically-Generated Siloxycarbenes and Clarification of Substituent Effects by Laser Flash Photolysis

9:15-9:30 **OP-51 Ken Kamikawa, Ya-Yi Tseng, Tamotsu Takahashi, Masamichi Ogasawara**
Synthesis of Planar Chiral Phosphine-Olefin Ligands Based on a Transition Metal Scaffold and Application in Asymmetric Catalysis

9:30-9:45 **OP-52 B. Ranieri, C. Obradors, J. Carreras, L. López-Suarez, A. M. Echavarren**
Gold-Catalysed Approaches to the Asymmetric Total Synthesis of Rumphellaone A

9:45-10:00 **OP-53 Nobuaki Yamamura, Yasuki Hayashi, Takahiro Kusukawa, Toshiro Harada**
Practical Method for Enantioselective Arylation of Aldehydes with Aryltitanium Reagents Catalyzed by Highly Active Chiral Titanium Complexes

Chair: Takashi Ooi

10:00-10:15 **OP-54 Ryo Irie, Kosuke Arita, Shota Beppu, Sachie Arae, Hitoshi Fujimoto, Michinori Sumimoto, Kazunobu Igawa, Katsuhiko Tomooka**
Regio- and Enantioselective Catalytic Cycloisomerization of Aromatic Enyne Systems

10:15-10:30 **OP-55 Hiroto Yoshida, Ken Takaki**
Copper-Catalyzed Borylation Reactions with a Masked Diboron

- 10:30-10:45 **OP-56** **Itaru Nakamura, Shinya Gima, Yu Kudo, Masahiro Terada**
Gold- and Copper-Catalyzed Skeletal Rearrangement of *O*-Propargylic Oximes
- 10:45-11:00 **OP-57** **Tienan Jin, Jian Zhao, Naoki Asao, Yoshinori Yamamoto**
Pd-Catalyzed Dual C-H Activation of Bis-Biaryl Alkynes and Biaryl Alkynes