

The 10th International Symposium on Carbanion Chemistry (ISCC-10)

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DAILY PROGRAM

September 23, Monday

11:00-13:00 **Registration**

13:00-13:20 **Opening Remarks**

Chair: Reinhard W. Hoffmann (Philipps Universität Marburg)

13:20-14:00 **IL-01 Jun-ichi Yoshida** (Kyoto University)

Organolithium Chemistry in Flow Microreactors Based on High-Resolution Control of Reaction Time by Space

14:00-14:40 **IL-02 Mukund P. Sibi** (North Dakota State University)

Enantioselective Enolate Protonations

14:40-15:20 **IL-03 Masanobu Uchiyama** (The University of Tokyo)

New Formulas for Organozincate Chemistry

15:20-15:50 **Break**

Chair: Nobuaki Kambe (Osaka University)

15:50-16:05 **SIL-01 Hideki Amii** (Gunma University)

β -Carbon Elimination for Catalytic Aromatic Trifluoromethylation

16:05-16:20 **SIL-02 Koji Hirano** (Osaka University)

Copper-Catalyzed Aminoboration of Alkenes with Bis(pinacolato)diboron and Hydroxylamines

16:20-17:00 **IL-04 Carmen Nájera** (University of Alicante)

Enantioselective 1,3-Dipolar Cycloadditions of Stabilized N-Metalated Azomethine Ylides

17:00-17:40 **IL-05 Amos B. Smith, III** (University of Pennsylvania)

Evolution of Anion Relay Chemistry (ARC): Design, Synthesis and Validation of Recoverable Siloxane-Based Transfer Agents for Palladium-Catalyzed Cross-Coupling Reactions

18:30- **Welcome Meeting (Kyoto Garden Palace)**

September 24, Tuesday

Chair: Ilhyong Ryu (Osaka Prefecture University)

9:00- 9:40

IL-06 Jacques Maddaluno (Université de Rouen)

Intramolecular carbometallation of (hetero)substituted alkynes

9:40-10:20

IL-07 Sang-gi Lee (Ewha Womans University)

Waking-up a More than 100 Years Dormant Carbanion for New Tandem Reactions

10:20-10:35

SIL-03 Tomoya Miura (Kyoto University)

Highly Diastereo- and Enantioselective Synthesis of anti-Homoallylic Alcohols Based on Relay Work of Cationic Iridium Complex/Chiral Phosphoric Acids

10:35-11:05

Break

Chair: Hiromichi Fujioka (Osaka University)

11:05-11:20

SIL-04 Tomoyuki Yoshimura (Kyoto University)

Asymmetric Intramolecular Alkylation via Short-Lived C-O Axially Chiral Enolates

11:20-11:35

SIL-05 Isabelle Chataigner (Université de Rouen)

Reactivity of Electron-poor Arenes Towards Ylides and Electron-rich Alkenes

11:35-11:50

SIL-06 Yousuke Yamaoka (Kyoto University)

Base-Induced Stereoselective Formation of Benzo-fused Cyclobutanols from Biarylketones

11:50-12:30

IL-08 Alessandro Mordini (University of Florence)

Design and Synthesis of New Heterocycles and Their Use as Organic Chromophores

12:30-13:50

Lunch

Chair: Kiyosei Takasu (Kyoto University)

13:50-14:05

SIL-07 Yasuhiro Yamashita (The University of Tokyo)

Development of Carbon-Carbon Bond Forming Reactions Using Metal Amides as Catalysts

14:05-14:20

SIL-08 Carsten Strohmann (Technische Universität Dortmund)

Catalytic and Stereoselective Lithiations of Ferrocene Derivatives

14:20-14:35

SIL-09 Atsushi Kawachi (Hiroshima University)

Development of Monolithio- and Dilithioarenes Bearing Functionalized Silyl Groups Directed toward Synthesis of Silicon-containing Ladder Polymers

14:35-14:50

SIL-10 Takamitsu Hosoya (Tokyo Medical and Dental University)

Generation of Arynes via Ate Complexes of Arylboronic Esters with an ortho-Leaving Group

14:50-16:20 **Poster Session**

***Special Session: Commemoration of Carbanion Legends
Professors Boche, Klumpp, Kresge, and Gawley***

Chair: Kiyoshi Tomioka (Doshisha Women's College of Liberal Arts)

16:20-16:25 **Eulogy Reinhard W. Hoffmann** (Philipps Universität Marburg)

Professor Gernot Boche

16:25-16:50 **SIL-11 Andrew Streitwieser** (University of California Berkeley)

Theoretical and Semi-Theoretical Brønsted Correlations of Carbanions

16:50-17:30 **IL-09 Peter O'Brien** (University of York)

Basic Instinct: Asymmetric Synthesis of Nitrogen-containing Heterocycles

17:30-18:10 **IL-10 Paul G. Williard** (Brown University)

Formula Weight Determination by Diffusion NMR

18:10-18:50 **IL-11 Victor Snieckus** (Queen's University)

The Aromatic Metalation – Catalytic Cross Coupling Symbiosis

September 25, Wednesday

Chair: Miguel Yus (University of Alicante)

9:00-9:40 **IL-12 Tien-Yau Luh** (National Taiwan University)

Propargylic Dithioacetals in Synthesis

9:40-10:20 **IL-13 Valérie Alezra** (Université Paris Sud)

From Memory of Chirality to Frozen Chirality: Original methods for the enantioselective synthesis of amino acids

10:20-10:35 **SIL-12 Norio Shibata** (Nagoya Institute of Technology)

A Sterically Demanding Organo-superbase Avoids Decomposition of a Naked Trifluoromethyl Carbanion Directly Generated from Fluoroform

10:35-11:05 **Break**

Chair: Takeo Kawabata (Kyoto University)

11:05-11:20 **SIL-13 Yutaka Ukaji** (Kanazawa University)

Magnesium-Tartramide Complex Mediated Asymmetric Strecker-Type Reaction of Nitrones Using Cyanohydrin

11:20-11:35 **SIL-14 Julien Graff** (University of Geneva)

Application of the asymmetric bromine-lithium exchange towards syntheses of bicoumarin chiral building blocks

- 11:35-11:50 **SIL-15 Kazuaki Ishihara** (Nagoya University)
Unusual C-Selective and Diastereoselective Alkylation to α -Imino Esters with Zinc(II) Ate Reagents
- 11:50-12:30 **IL-14 Mitsuru Shindo** (Kyushu University)
Reactions of Ynolates and Synthetic Applications
- 12:30-13:50 **Lunch**
- Chair: Hideki Yorimitsu** (Kyoto University)
- 13:50-14:05 **SIL-16 Terumichi Enomoto** (Doshisha Women's College of Liberal Arts)
NHC-Palladium Catalyzed Diastereoselective 1,2-Addition of Arylboronic Acid with Garner Aldehyde: Synthesis of C8-16 Fragment of epi-10-Ustiloxin D
- 14:05-14:20 **SIL-17 Takanori Iwasaki** (Osaka University)
Cross-Coupling of Tertiary Alkyl Grignard Reagents with Alkyl Halides Catalyzed by Cobalt Using 1,3-Butadiene as an Additive
- 14:20-14:35 **SIL-18 Toshiro Harada** (Kyoto Institute of Technology)
Catalytic Enantioselective Addition of Functionalized Alkyl Groups to Aldehydes by Using Organozinc and Organoboron Reagents
- 14:35-14:50 **SIL-19 Katsuhiko Tomooka** (Kyushu University)
Asymmetric Transannular Aza-[2,3]-Wittig Rearrangement of Planar Chiral Organonitrogen Cycles
- 14:50-15:05 **SIL-20 Nobuyuki Kawai** (Kyoto Pharmaceutical University)
Julia-Kocienski reaction for 1-phenethyltetrahydroisoquinoline alkaloids
- 15:05-16:35 **Poster Session**
- Chair: Yoshinori Yamamoto** (Tohoku University)
- 16:35-16:50 **SIL-21 Koichi Mikami** (Tokyo Institute of Technology)
Trifluoromethyl Metal Reagents: Isolation and Synthetic Use
- 16:50-17:05 **SIL-22 Hirohisa Ohmiya** (Hokkaido University)
Enantioselective Conjugate Addition and Allylic Substitution with Alkylboranes Catalyzed by Copper(I) Complexes
- 17:05-17:45 **IL-15 Richmond Sarpong** (University of California Berkeley)
C-N Bond Formation by Oxidation of C,N-Dianions
- 17:45-18:25 **IL-16 Zhenfeng Xi** (Peking University)
Synthesis of Semibullvalenes and Diazasemibullvalenes via Organo-di-Metallic Reagents
- 19:00- **Banquet (Kyoto Garden Palace)**

September 26, Thursday

Chair: Hans Reich (University of Wisconsin, Madison)

- 9:00-9:40 **IL-17 Robert E. Mulvey** (University of Strathclyde)
FascinATES: Synergistic Reactivity in Alkali-Metal-Mediated Metallation
- 9:40-10:20 **IL-18 Svetlana B. Tsogoeva** (University of Erlangen-Nuremberg)
Highly Enantioselective Formation of Quaternary and Tertiary Carbon Centers via Bifunctional Organocatalysis
- 10:20-10:35 **SIL-23 Han Yong Bae** (Sungkyunkwan University)
Malonic Acid Half-Thioesters (MAHTs) as Enolate Precursors in the Asymmetric Organocatalytic Reactions: From Mimicry of Polyketide Synthases to Scalable Synthesis of Some Pharmaceuticals
- 10:35-11:05 **Break**
- 11:05-11:20 **SIL-24 Tsuyoshi Mita** (Hokkaido University)
One-Pot Synthesis of α -Amino Acids Using CO₂ via α -Amino Carbanion Intermediates
- 11:20-12:00 **IL-19 Tomislav Rovis** (Colorado State University)
Design and Utility of Nucleophilic Carbenes for Asymmetric Acyl Anion Catalysis
- 12:00-12:40 **SPL Ei-ichi Negishi** (Purdue University)
General and Highly Enantioselective ($\geq 99\%$ ee) Catalytic C–C Bond Formation via ZACA Reaction
- 12:40-12:55 **Closing Remarks and Announcement of Next ISCC-11**

POSTER PROGRAM

- P-01 **Palladium Catalyzed Intramolecular Cyclization Reaction : Interesting Tool for the Synthesis of Pentalongin – antibiotics**
Jayanta Kumar Ray
- P-02 **Copper-Catalyzed Enantioselective Synthesis of Axially Chiral Allenes**
Hailing Li and Alexandre Alexakis*
- P-03 **Copper-Catalyzed Asymmetric Conjugate Addition of Alkenyl- and Alkylalanes to α,β -Unsaturated Lactams**
Pierre Cottet and Alexandre Alexakis*
- P-04 **Asymmetric Intermolecular Conjugate Addition of Amino Acid Derivatives via Memory of Chirality: Total Synthesis of Manzacidin A**
Tomohiko Kinoshita, Hiroyasu Yoshioka, Tomoyuki Yoshimura, Takeo Kawabata*
- P-05 **Palladium-catalyzed regiocontrolled cyclization reactions of ω -hydroxy ynamides with aryl triflates and halides**
Daishi Fujino, Hideki Yorimitsu,* and Atsuhiko Osuka
- P-06 **Intramolecular Cyclization Using Phosphonate-stabilized Anion: Efficient Synthesis of Highly-Substituted Oxetan- and Azetidin-, Dihydrofuran- and Pyrrolidin-3-ones and Its Application**
Tomohiro Maegawa, Kazuki Otake, Keiichi Hirosawa, Akihiro Goto, and Hiromichi Fujioka*
- P-07 **Palladium-Catalyzed Silylation of Aryl Chlorides with Silylsilatrane**
Yutaro Yamamoto, Kei Murakami, Hideki Yorimitsu* and Atsuhiko Osuka*
- P-08 **C5-C6 Coupling of MART-10 Synthesis and Its Clinical Implication in Cancer Treatment and Prevention**
Masashi Takano, Kun-Chun Chiang, Horng-Heng Juang, Kaori Yasuda, Toshiyuki Sakaki, Toshimasa Itoh, Keiko Yamamoto, Daisuke Sawada, John N. Flanagan, Gunnar Norstedt, Tai C. Chen, and Atsushi Kittaka*
- P-09 **Nucleophilic α -Arylation of Carbonyls by using Triarylaluminum Reagents**
Okiko Miyata*, Tetsuya Miyoshi, Shohei Sato, and Masafumi Ueda
- P-10 **A New Progress in Carbonylative [2+2+1] Cycloaddition: First Utilization of Nitrile Group as π -component**
Takashi Iwata, Fuyuhiko Inagaki, Chisato Mukai*
- P-11 **One-Pot Synthesis of Heteroaryl and Diheteroaryl Ketones through Palladium-Catalyzed 1,2-Addition and Oxidation**
Masami Kuriyama, Norihisa Hamaguchi, and Osamu Onomura*

- P-12 **Enantiodivergent Deprotonation–Substitution of *N*-Protected α -Amino Nitriles**
Michiko Sasaki, Yuri Kotomori, Tomo Takegawa, Kunihiro Sakamoto, Rumiko Shimabara and Kei Takeda*
- P-13 **First Total Synthesis of Marine Sesquiterpenoid (–)-Sinularianin B**
Koichiro Ota, and Hiroaki Miyaoka*
- P-14 **Demetalation of Metal Porphyrins by Grignard Reagent via Magnesium Porphyrins**
Kei Murakami, Yutaro Yamamoto, Hideki Yorimitsu,* and Atsuhiko Osuka*
- P-15 **Tandem Reactions Induced by Enantioselective Reduction by Lithium Amide**
Yasuhiro Kondo, Taichi Motoishi, Michiko Sasaki, and Kei Takeda*
- P-16 **Trapping of Silyl Ketene Imines at a Low Temperature**
Masafumi Ando, Michiko Sasaki, and Kei Takeda*
- P-17 **Synthetic Approach of α -substituted Carbonyl compounds by way of Umpolung Strategies**
Hiroki Tanimoto,* Yusuke Mizutani and Kiyomi Kakiuchi
- P-18 **A Concise Access to (Polyfluoroaryl)allenes by Cu-Catalyzed Direct Coupling with Propargyl Phosphates**
Akihiro Nakatani, Koji Hirano,* Tetsuya Satoh, and Masahiro Miura*
- P-19 **1,2-Addition of *tert*-Butylzinc Reagent and Carbonyls Toward Conjugated Dienes**
Yuki Ohira, Gen Onodera, and Masanari Kimura*
- P-20 **Organocatalytic Functionalization Making Use of *in situ* Generated Onium Amide Bases**
Kiyofumi Inamoto,* Hitomi Okawa, Yuta Araki, Misato Yonemoto, Shoko Kikkawa, and Yoshinori Kondo*
- P-21 **Synthesis of the Carbon Framework of Scholarisine A by Intramolecular Oxidative Coupling**
Nobuki Kato, Tsugunori Watanabe, Naoki Umezawa and Tsunehiko Higuchi*
- P-22 **Coupling Reaction of Magnesium Carbenoids with α -Sulfonylallyllithiums: An Efficient Route to Conjugated Dienes**
Gen Kobayashi, Mio Inumaru, Tsutomu Kimura, Tsuyoshi Satoh*
- P-23 **Synthesis of Multisubstituted Cyanocyclopropanes and α -Chlorocyclobutanones Utilizing Ambiphilic Magnesium Carbenoids**
Taro Sampei, Tatsuya Watanabe, Tsutomu Kimura, Tsuyoshi Satoh*
- P-24 **Nucleophilic Substitution at the Vinylic Carbon Atom of Magnesium Alkylidene Carbenoids: Synthetic Applications and DFT Study**
Tsutomu Kimura* and Tsuyoshi Satoh
- P-25 **Synthesis of Conjugated Unsaturated Compounds Starting from Conjugate Addition of Lithium Acetylides to 1-Chlorovinyl *p*-Tolyl Sulfoxides**
Yuka Nishimura, Naoyuki Ishida, Tsutomu Kimura, Tsuyoshi Satoh*

- P-26 **Development of New Highly Soluble Spherands and the Attempted Synthesis of Hypervalent Compounds**
Yuri Kuwana, Naoyuki Suzukawa, and Yohsuke Yamamoto*
- P-27 **Synthetic Study for the Biologically Active Natural Product: Lantalucratins A-C by Utilizing Ortho-Directed Lithiation-Alkylation Strategy**
Tokutaro Ogata, Yoshiko Sugiyama, Momoe, Ishigaki, Kazuha Nakano, Saki, Ito, Arisa Nishiuchi, and Tetsutaro Kimachi*
- P-28 **Copper-Catalyzed Amination of Hydrofullerenes via C-H Functionalization**
Weili Si, Shirong Lu, Naoki Asao, Yoshinori Yamamoto, and Tienan Jin*
- P-29 **Tandem Procedure of Diels-Alder/Cross-Coupling Reactions with Organoindium Reagents**
Youngchul Park, Juntae Mo, Incheol Jeon, and Phil Ho Lee*
- P-30 **Palladium-Catalyzed Multialkynyl Cross-Coupling Reactions with In Situ Generated Tetra(alkynyl)indates**
Youngchul Park, Dongjin Kang, Seohyun Shin, and Phil Ho Lee*
- P-31 **Preparation of Indolizines through a Tandem Palladium-Catalyzed Cross-Coupling Reaction and Cycloisomerization**
Youngchul Park, Gwangmoo Lee, Yea Rin Kim, and Phil Ho Lee*
- P-32 **Preparation of Di-, Tri-, and Tetrasulfides through Multifold Carbon-sulfur Cross-Coupling Reactions with Indium Tri(organothiolates) in a One-Pot Procedure**
Youngchul Park, Sangkyun Park, Yeonseok Jeong, and Phil Ho Lee*
- P-33 **Synthesis of Ethyl 2-Aryl 2,3-Alkadienoates via Palladium-Catalyzed Selective Cross-Coupling Reactions**
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- P-34 **Palladium-Catalyzed Allyl Cross-Coupling Reactions with Organoindium Reagents**
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- P-35 **Palladium-Catalyzed Carbon-Sulfur Cross-Coupling Reactions Using Indium Tris(organothiolates)**
Cheol-Eui Kim, Juntae Mo, Sujin Lim, and Phil Ho Lee*
- P-36 **Hydrosilyloxylation Driving Tandem Aldol and Mannich Reactions Catalyzed by Gold**
Cheol-Eui Kim, Dongjin Kang, Sangjune Park, and Phil Ho Lee*
- P-37 **Tandem Gold-Catalyzed Hydrosilyloxylation-Aldol and -Mannich Reaction with Alkynylaryloxysilanols**
Cheol-Eui Kim, Euichul Lee, Seohyun Shin, and Phil Ho Lee*
- P-38 **Quinonediimine-Induced Oxidative Coupling of Organomagnesium Reagent**
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- P-39 **Highly Stereoselective Multi-Component Coupling Reaction of Alkyne and Dimethylzinc via Oxanickelacycle**
Takuro Yamashita, Takamichi Mori, Gen Onodera, and Masanari Kimura*
- P-40 **Development of Novel Tandem Reaction via Sequential Carbozincation and C-C Bond Cleavage of Cyclopropylzinc Species**
Takeo Nakano, Kohei Endo*, and Yutaka Ukaji
- P-41 **Synthesis of 2-Aza-1,3-dienes by Palladium-Catalyzed Decarboxylative Condensation of Isoxazol-5(4*H*)-ones with Aldehydes**
Takuya Shimbayashi, Kazuhiro Okamoto, and Kouichi Ohe*
- P-42 **Cu(I)-catalyzed Diastereoselective C-glycosidation of Unprotected Sugars**
Xiao-Feng Wei, Shi-Liang Shi, Yohei Shimizu*, Motomu Kanai*
- P-43 **“High” Temperature Asymmetric α -Lithiation-trapping of *N*-Boc Pyrrolidine: Synthesis of Tetra-substituted Pyrrolidines**
Giacomo Gelardi, Peter O’Brien
- P-44 **Novel Aspects of the α -Lithiation/Trapping of *N*-Boc Piperazines**
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- P-45 **Enantioselective Alkynylation of Carbonyl Compounds Using Lithium Acetylides as Alkynyating Reagents**
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- P-47 **Synthesis of Amino Acid Conjugates of *epi*-Jasmonic Acid and Its Stereoisomers**
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- P-48 **Intermolecular [2+2] Addition of Terminal Alkynes with Alkyl Acrylates Catalyzed by an 8-Quinolinolato Rhodium Complex**
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- P-49 **Photoinduced Perfluoroalkylchalcogenation of Alkynes and Application to Formation of Perfluoroalkylated Vinyl Anion Equivalents**
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- P-50 **Development of Novel Rare Earth Reduction Systems Designed to Synthesize Functional Polysilanes**
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- P-51 **Copper- or Iron-Mediated Three-component Coupling of 2-Alken-4-ynoates, Grignard Reagents, and Organic Halides**
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- P-52 **Mechanistic Studies on Palladium-Catalyzed Three-Component Coupling Reaction of Arynes, Isocyanides, and Cyanofornates**
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- P-53 **Formal [4+1] Cycloaddition via Tandem O-H Insertion/Conia-ene Reaction**
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- P-55 **Stereoselective Synthesis of Amino-Substituted Silyl Enol Ethers by Rhodium-Catalyzed Reaction of *N*-Sulfonyl-1,2,3-triazoles with Silanols**
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- P-59 **Catalytic Asymmetric Cycloaddition of Carbonyl Ylides with Arylallenes using $\text{Rh}_2(\text{S-TCPTTL})_4$**
Janagiraman Krishnamurthi, Koji Takeda, Hisanori Nambu, Masahiro Anada, Thrimurtulu Neetipalli, and Shunichi Hashimoto*
- P-60 **Application of enantioselective [2,3]-Wittig rearrangement to asymmetric total synthesis of eupomatilones**
Maria Kitamura, Yoshimi Hirokawa, and Naoyoshi Maezaki*
- P-61 **Visible-Light-Induced Radical Reactions with Organoborates by Photoredox Catalysis**
Yusuke Yasu, Kazuki Miyazawa, Takashi Koike,* and Munetaka Akita*
- P-62 **Generation and Carbonylation of α -Silyl-Substituted Carbanions Using a Continuous Microflow System**
Takahide Fukuyama*, Takenori Totoki, and Ilhyong Ryu*
- P-63 **Generation of Arynes Triggered by Sulfoxide–Metal Exchange Reaction of *ortho*-Sulfinylaryl Triflates**
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