International Joint Symposium on Synthetic Organic Chemistry

jointly organized by

12th International Symposium on Integrated Synthesis (ISONIS-12)
International Conference on Super Functional Catalysts (ICSFC)

November 21 (Thus) – 23 (Sat), 2019
Awaji (Hyogo), Japan

Program
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November 21 (Thursday), 2019

18:00  **Poster Session & Mixer**  
Awaji Yumebutai International Conference Center B1F Lobby

November 22 (Friday), 2019

15:30 **Poster Session**  
15:30 – 16:15 odd numbers  
16:15 – 17:00 even numbers  
Awaji Yumebutai International Conference Center B1F Lobby

21:00 **Poster Session**  
all numbers
Poster Presentations

**PXX** (Poster Number Underlined) : ISONIS-12 Poster Prize Nominee

**P-01** Yasuhiro Uozumi (Institute for Molecular Science)
“Recent Development of Flow Reaction Systems with Novel Polymeric Catalysts”

**P-02** Takao Osako, Jakkrit Srisa, Kaoru Torii, Go Hamasaka, Yasuhiro Uozumi (Institute for Molecular Science)
“Iterative Preparation of Platinum Nanoparticles in an Amphiphilic Polymer Matrix: Regulation of Catalytic Activity in Hydrogenation”

**P-03** Guanshuo Shen, Takao Osako, Makoto Nagaosa, Yasuhiro Uozumi (Institute for Molecular Science)
“Aqueous Asymmetric 1,4-Addition with PS-PEG Supported Diene*-Rh Catalyst ”

**P-04** Shun Ichii, Go Hamasaka, Yasuhiro Uozumi (Institute for Molecular Science; SOKENDAI)
“A Palladium NNC-Pincer Complex as an Efficient Catalyst Precursor for the Mizoroki-Heck Reaction”

**P-05** Shun Ichii, Go Hamasaka, Yasuhiro Uozumi (Institute for Molecular Science; SOKENDAI)
“The Hiyama Coupling Reaction at Ppm Levels: In Situ Formation of Highly Active Spirosilicates in Glycol Solvents”

**P-06** Takeshi Fujinami,¹ Shunya Oishi,² Yu Masui,² Toshiyasu Suzuki,¹,² Norie Momiyama¹,² (¹Institute for Molecular Science; ²SOKENDAI)
“Development of Highly Efficient Iodonium Complex Catalyst Utilizing Three-center Four-electron Halogen-Bond”

**P-07** Tatsuaki Hori,¹,² Katsunori Yamanishi,¹ Taku Watanabe,¹,² Takeshi Fujinami,¹ Norie Momiyama¹,² (¹Institute for Molecular Science; ²SOKENDAI)
“Development of Polymer-Immobilized Nucleophilic Catalyst via Halogen Bond”
P-08 Atsuto Izumiseki,1,2 Tao Yang,3 Masahiro Ebara,1,2 Fumio Nakashima,1,2
Seiji Tsuzuki,4 Masayuki Kato,1,2 Takeshi Fujinami,1 Naoya Ohtsuka,1
Norie Momiyama1,2 (1Institute for Molecular Science; 2SOKENDAI; 3University of Marburg; 4AIST (National Institute of Advanced Industrial Science and Technology))
“Perfluorinated Iodoaryls as Efficient Anion Binding Catalysts based on Halogen- and Hydrogen Bonding”

P-09 Hao Hu,1 Aya Ohno,1 Takuma Sato,1 Toshiaki Mase,2 Yasuhiro Uozumi,1,2
Yoichi M. A. Yamada1 (1RIKEN CSRS; 2Institute for Molecular Science)
“A Molecular Convoluted Polymeric Pyridine Copper Catalyst for the Huisgen Cycloaddition of Alkynes and Acetylene Gas: Application in Synthesis of Tazobactam”

P-10 Heeyoel Baek,1 Hajime Ota,1 Hao Hu,1 Kenta Shinoara,1 Toshiaki Mase,2
Yasuhiro Uozumi,1,2, Yoichi M. A. Yamada1 (1RIKEN; 2Institute for Molecular Science)
“Preparation of a Novel Phenol Sulfonic-Acid Formaldehyde Resin Catalyst toward Esterification of Various Carboxylic Acids and Alcohols under Batch and Flow Conditions”

P-11 Aya Ohno,1 Takuma Sato,1 Toshiaki Mase,2 Yasuhiro Uozumi,1,2
Yoichi M. A. Yamada1 (1RIKEN; 2Institute for Molecular Science)
“Suzuki-Miyaura Reaction and Direct C-H Arylation with Aryl Halides Using Highly Active Molecular Convoluted Polymeric Pyridine-Palladium Catalysts”

P-12 Riho Obayashi, Kazuki Ishihara, Kotaro Ishihara, Yuki Kobayashi, Takayuki Shioiri, Masato Matsugi (Meijo University)
“Recyclable Proline Catalyst for Asymmetric Aldol Reaction Utilizing Medium Fluorous Strategy”

P-13 Yuki Watanabe, Yuki Kobayashi, Takayuki Shioiri, Masato Matsugi (Meijo University)
“Asymmetric Epoxidation of Isolated Carbon–Carbon Double Bonds by Fluorous Fe(III) Salen Complex”
P-14 Mizuki Ohira, Yuki Kobayashi, Takayuki Shioiri, Masato Matsugi (Meijo University)
“Activation of Grubbs–Hoveyda Second-Generation Catalyst via Intramolecular Steric Strain Based on CH/π Interaction”

P-15 Yosuke Ashikari,1 Kodai Saito,1 Toshiki Nokami,1 Jun-ichi Yoshida,2 Aiichiro Nagaki1 (1Kyoto University; 2National Institute of Technology, Suzuka College)
“Oxo-thiolation of Cationically Polymerizable Alkenes with Anodic Cations Using Flow Microreactors”

P-16 Kazuki Hirano, Satoshi Gondo, Norio Shibata (Nagoya Institute of Technology)
“Flow-micro Trifluoromethylation Using Fluoroform”

P-17 Nobuyuki Mase, Takuya Kon, Kohei Sato, Tetsuo Narumi, Kazuhiro Takeda (Shizuoka University)
“Machine Learning-Based Reaction Optimization Using Microwave-Assisted Continuous Flow Reactor”

P-18 Yutaka Shimizu, Hiroki Yamashita, Aiichiro Nagaki (Kyoto University)
“Selective Generation of Carbocations by Brønsted Acids Using Flow Microreactors”

P-19 Toshiyuki Iwai, Takatoshi Ito, Shuhei Sumino, Fukashi Matsumoto, Toshinobu Ohno (Osaka Research Institute of Industrial Science and Technology)
“Continuous Flow Synthesis of Methanofullerene Derivative PCBM Using in situ Generated Sulfur Ylide”

P-20 Kazuki Ota, Isao Mizota, Makoto Shimizu, Iwao Hachiya (Mie University)
“Umpolung Reaction of α-Sulfoximino Ester Using a Flow System”

P-21 Yusuke Takahashi, Ibuki Shite, Aiichiro Nagaki (Kyoto University)
“Random Copolymerization of Methacrylates by Monomer Addition Using Flow Microreactor”

P-22 Takahide Fukuyama,1 Tatsuya Kusaka,1 Masayuki Ohira,2 Ilhyong Ryu1 (1Osaka Prefecture University; 2Hamari Chemicals, Ltd.)
“One-Flow Synthesis of Tranexamic Acid”
P-23  Momoe Nakano,1 Tsumoru Morimoto,1 Jiro Noguchi,1 Hajime Mori,2 Shin-ichi Tokumoto,2 Hideyuki Koishi,2 Yasuhiro Nishiyama,2 Kiyomi Kakiuchi1 (1Nara Institute of Science and Technology (NAIST); 2Industrial Technology Center of Wakayama Prefecture)  “Accelerated Organic Photoreactions Using N2 Gas as an Unreactive Substance in Flow Microreactors”

P-24  Koichi Higashio,1 Satoko Katsuragi,1 Franziska Kühn,2 Niklas Adebar,2 Carmen Plass,2 Harald Gröger,2 Shuji Akai1 (1Osaka University; 2Bielefeld University)  “Lipase-Catalyzed Continuous Flow Dynamic Kinetic Resolution of Racemic Alcohols”

P-25  Yiyuan Jiang, Masahiro Takumi, Aiichiro Nagaki (Kyoto University)  “Heterogeneous Schotten-Baumann Reaction Using Flow Microreactors”

P-26  Yasuhiro Nishiyama, Akira Fujii, Hajime Mori (Industrial Technology Center of Wakayama Prefecture)  “Selective Synthesis of Azoxybenzenes from Nitrobenzenes by Visible Light Irradiation under Continuous Flow Conditions”

P-27  Mahito Atobe, Juri Minoshima, Atsushi Fukazawa (Yokohama National University)  “Stereoselective Electrocatalytic Semihydrogenation of Alkynes to Z-Alkenes Using a PEM Reactor”

P-28  Taichi Inoue,1 Yasunori Matsui,1,2 Eisuke Ohta,1,2 Hiroshi Ikeda1,2 (1Osaka Prefecture University; 2The Research Institute for Molecular Electronic Devices, Osaka Prefecture University)  “Performance Evaluation of Flow Photoreactors Using Intramolecular Photocycloaddition of Naphthalene Derivative”

P-29  Masahiro Takumi,1 Hodaka Sakaue,1 Jun-ichi Yoshida,2 Aiichiro Nagaki1 (1Kyoto University; 2National Institute of Technology, Suzuka College)  “Generation of Organic Sulfonium Ions Using Electrochemical Flow Reactors and their Synthetic Applications”

P-30  Yasuhiro Okuda, Kazuto Imafuku, Yoshiyuki Tsuchida, Tomoyo Seo, Akihiro Orita (Okayama University of Science)  “Dephosphorylative Transformation of Phosphorylethynes to Triazoles”
P-31 Masaki Kobayashi, Keisuke Yoshimura, Satoshi Itoh, Yuya Tsukamoto, Yasushi Obora (Kansai University)
“Iridium-Catalyzed C2 Extension of Primary Alcohols with Ethanol via Hydrogen Borrowing Reaction”

P-32 Yushi Kuroda,1 Takeyuki Suzuki,2 Yasushi Obora1 (1Kansai University; 2The Institute of Scientific and Industrial Research Osaka University)
“Hydrosilylation of Alkenes and Alkynes with DMF-protected Cobalt Nanoparticles”

P-33 Kiyosei Takasu, Kazuma Sugimoto, Shun Fujimura, Ken-ichi Yamada, Hiroshi Takikawa, Yousuke Yamaoka (Kyoto University)
“KHMDS-Promoted Enolate–Olefin Metathesis”

P-34 S. Yamazaki,1 K. Katayama,1 H. Sugiura,2 A. Ogawa,2 T. Morimoto3 (1Nara University of Education; 2Osaka Prefecture University; 3Nara Institute of Science and Technology (NAIST))
“Inter-and Intramolecular Lewis Acid-Promoted [2+2] Cycloaddition Reactions of Ethenetricarboxylates with Styrenes and Halostyrenes”

P-35 Bayu Ardiansah, Hiroki Tanimoto Kiyomi Kakiuchi (Nara Institute of Science and Technology (NAIST))
“Chemical Bond Cleavage of Unreactive Organic Azides”

P-36 Keisuke Asano, Seijiro Matsubara (Kyoto University)
“Organocatalytic Enantio- and Diastereoselective Cycloetherification of Chiral Cyanohydrins”

P-37 Kazuyuki Torii, Atsushi Kawakubo, Xianjin Lin, Tatsuo Yajima, Yasushi Obora (Kansai University)
“Palladium-Catalyzed Difunctionalization of 1,3-Dienes with Amines and Disilanes Using a Mild Oxidation System”

P-38 Shun Sakurai, Mamoru Tobisu (Osaka University)
(OP-2) “Iridium-Mediated Arylation of Quinoline via the Cleavage of C-C and C-N Bonds of N-Heterocyclic Carbenes”
P-39  Momoko Hara,1 Aya Ogawa,1 Yukihiro Arakawa,1 Keiji Minagawa,2 Yasushi Imada1 (1Department of Applied Chemistry and 2Institute of Liberal Arts and Sciences, Tokushima University) “Designing Chiral Guanidine Catalysts Through Noncovalent Modification”

P-40  Takashi Ohshima, Yuta Kondo, Tetsuya Kadota, Yoshinobu Hirazawa, Kazuhiro Morisaki, Hiroyuki Morimoto (Kyushu University) “One-Pot Process Based on Sc-Catalyzed Direct N-Unprotected Ketimine Synthesis”

P-41  Yoshihiro Ueda, Ryo Ninimiya, Kenta Arai, Kazuhiro Morisaki, Takeo Kawabata (Kyoto University) “β-Silicon-Effect-Promoted Intermolecular Site-Selective C(sp3)-H Amination with Dirhdium Nitrenoids”

P-42  S. Yamazaki,1 K. Iwata,1 T. Morimoto2 (1Nara University of Education; 2Nara Institute of Science and Technology (NAIST)) “Stereoselective Formation of Nitrogen-containing Heterocycle-fused Cyclobutanes via Intramolecular Cycloadditions of Styrene-derived Ethenetricarboxylate Amides”

P-43  Tatsuki Nagata,1 Ryota Kondo,1 Takeyuki Suzuki,2 Yasushi Obora1 (1Kansai University; 2The Institute of Scientific and Industrial Research, Osaka University) “Synthesis of Ru Nanoclusters and their Catalytic Activity in Guerbet Reactions”

P-44  Fumiya Takahashi,1 Keisuke Nogi,1 Takahiro Sasamori,2 Hideki Yorimitsu1 (1Kyoto University; 2Nagoya City University) “Diborative Reduction of Alkynes to 1,2-Diboryl-1,2-Dimetalloalkanes: Its Application for the Synthesis of Diverse 1,2-Bis(boronate)s”

P-45  Keiji Konishi, Motohiro Yasui, Norihiko Takeda, Masafumi Ueda (Kobe Pharmaceutical University) “Copper-Catalyzed Synthesis of Multisubstituted Pyrroles by Cycloisomerization of Cyclopropenyl Oxime Ether”

P-46  Takanori Iwasaki,1,2 Asuka Fukuoka,1 Xin Min,1 Wataru Yokoyama,1 Nobuaki Kambe1 (1Osaka University; 2The University of Tokyo) “Ni-Catalyzed Dimerization and Double Functionalization of 1,3-Dienes”
P-47 Tsumoru Morimoto, Yusuke Higashi, Naoto Akiyama, Makoto Abe, Kiyomi Kakiuchi (Nara Institute of Science and Technology (NAIST))
“Rh(I)-Catalyzed Asymmetric Cyclohydroformylation of Enynes with Formaldehyde”

P-48 Midori Kawasaki,1 Yuuka Ueda,1 Kiyomi Kakiuchi,2 Ryuichi Shirai1
(1Doshisha Women’s College of Liberal Arts; 2Nara Institute of Science and Technology (NAIST))
“Enantioselective Reaction of Carboxylic Acids by Chiral Lithium Amides”

P-49 Tatsuya Tanaka,1 Ryusei Azuma,1 Xianjin Lin,1 Ryota Kondo,1 Takeyuki Suzuki,2 Yasushi Obora1 (1Kansai University; 2The Institute of Scientific and Industrial Research, Osaka University)
“Hydrosilylation of Terminal Alkene Catalyzed by DMF-protected Fe2O3-Pt Bimetallic Nanoparticles”

P-50 Ryuichi Murata, Akira Matsumoto, Keisuke Asano, Seijiro Matsubara
(Kyoto University)
“Desymmetrization of gem-Diols via Asymmetric Cycloetherification Using Bifunctional Organocatalysts”

P-51 Seiji Suga, Koichi Mitsudo, Takayuki Hirata, Kazuki Yoshioka
(Okayama University)
“1,10-Phenanthroline or Electron Promoted Cyanation of Aryl Iodides”

P-52 Kengo Inoue, Daichi Mari, Suguru Hirai, Kentaro Okano, Atsunori Mori
(Kobe University)
“Trapping of N-Heteroaryl Lithium by In Situ Transmetalation”

P-53 Takuma Tagami,1 Yukihiro Arakawa,1 Keiji Minagawa,2
(OP-3) Yasushi Imada1 (1Department of Applied Chemistry and 2Institute of Liberal Arts and Sciences, Tokushima University)
“Efficient Use of Photons in Photoredox/Enamine Dual Catalysis with a Flavin–Amine Hybrid”

P-54 Masayoshi Utsunomiya, Yoshihiro Myokai, Ryota Kondo, Hiroyuki Takeshita, Yasushi Obora (Kansai University)
“Ti-Pd Alloys Catalyzed Alkylation of Methylquinolines with Alcohols via Hydrogen Autotransfer”
P-55  **Haruo Matsuzaki**, Yuta Ito, Norihiko Takeda, Motohiro Yasui, Masafumi Ueda (Kobe Pharmaceutical University)  
“Synthesis of Pyrazoles from Conjugated Hydrazone through Acid-Promoted β-Protonation/Nucleophilic Addition/Cyclization/Aromatization Sequence”

P-56  **Takaya Ikeuchi**, Shinsuke Inuki, Shinya Oishi, Hiroaki Ohno (Kyoto University)  
“Gold(I)-Catalyzed Cascade Cyclization Reactions of Allenynes for the Synthesis of Fused Carbocycles”

P-57  **Tsukushi Tanaka**, Ryo Yazaki, Takashi Ohshima (Kyushu University)  
“Catalytic α−Oxidation of Carboxylic Acids via Radical Process”

P-58  **Yuki Kimura**, Katsuya Kitai, Yasushi Obora (Kansai University)  
“DMF Protected Copper Nanoparticles Catalyzed Arylamine Synthesis”

P-59  **Ryota Wada**, Yuuki Maekawa, Koji Iwata, Toshiaki Murai (Gifu University)  
“Chiral Primary Phosphines Having Chiral Centers Adjacent to the Phosphorus Atom: Synthesis and Applications”

P-60  **Tsumoru Morimoto**, JingWen Jia, Yoshiko Yamaguchi, Kiyomi Kakiuchi (Nara Institute of Science and Technology (NAIST))  
“Rh(I)-Catalyzed [2+2+1] Cyclocarbonylation of Diynes under Photoirradiation”

P-61  **Keisuke Nogi**, Mizuki Fukazawa, Shiori Ito, Fumiya Takahashi, Hideki Yorimitsu (Kyoto University)  
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