

# Program

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**Aug. 26 (Mon)**

## Room A

15:00-15:15 *Opening Ceremony*

15:15-16:05 **PL01** Scott E. Denmark  
Application of Chemoinformatics and Machine Learning to Enantioselective  
Catalysis  
*Chair: James W. Canary*

16:15-16:30 *Award Ceremony*

16:30-17:30 **AW01** Nicholas A. Kotov  
Chiral Nanostructures  
*Chair: Bart Kahr*

18:30-20:30 *Reception @Mariage Grande*

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**Aug. 27 (Tue)**

## Room A

9:00-9:50 **PL02** Ivan I. Smalyukh  
Knotted Chiral Meta Matter  
*Chair: Reiko Oda*

*Chair: Jeanne Crassous*

10:00-10:30 **KN01** Yuxi Fang, Yingying Duan, Lu Han, Shunai Che  
Chiral Mesostuctured Inorganic Materials with CISS-based Various Chiral  
Anisotropy

10:30-11:00 **KN02** Yitzhak Mastai  
Hybrid Inorganic/Organic Chiral Thin Films by molecular layer deposition.

11:00-11:30 **KN03** Lorenzo Di Bari  
3D and 2D chirality as the source of conspicuous chiroptical properties

—Poster Session A and Lunch—

*Chair: Lorenzo Di Bari*

- 14:10-14:40 **KN04** **Kenji Hamase**  
Multi-dimensional and enantioselective HPLC analysis of amino acids and related compounds for the discovery of biomarkers and functional molecules
- 14:40-15:00 **OA01** **Christopher J. Welch**  
Enhanced Structure-Based Prediction of Chiral Stationary Phases for Chromatographic Enantioseparation from 3D Molecular Conformations
- 15:00-15:30 **KN05** **Reiko Kuroda**  
How does a single gene determine snail chirality through the biological hierarchy, from the fertilized egg to the individual organism?

—Coffee Break—

*Chair: Xinhua Wan*

- 15:50-16:20 **KN06** **Borja Hermida, Daniel Navarro, Helena Landín, Rafael Rodríguez, Emilio Quiñoá, Félix Freire**  
Stimuli-Responsive Helical Polymers: Helix Induction Mechanisms
- 16:20-16:50 **KN07** **Matthieu Raynal**  
Supramolecular helical catalysts: chirality induction and commutability
- 16:50-17:10 **OA02** **Tomoyuki Ikai, Wei Zheng, Kosuke Oki, Ranajit Saha, Yuh Hijikata, Eiji Yashima**  
One-Handed Helical Tubular Ladder Polymers with a  $\pi$ -Electron-Rich Cylindrical Helical Cavity for Chromatographic Enantioseparation
- 17:20-18:10 **PL03** **Tamio Hayashi**  
Recent Advances in Rhodium-Catalyzed Asymmetric Arylation  
*Chair: Hiroaki Sasai*

## Room B

*Chair: Ryo Shintani*

- 10:00-10:20 **OB01** **Masamichi Ogasawara**  
Asymmetric Metathesis Dimerization of Planar-Chiral/Planar-Prochiral Vinylferrocenes
- 10:20-10:40 **OB02** **Shuhei Ohmura, Hayato Akao, Kazuaki Ishihara**  
Development of Chiral Iron(III) Photoredox Catalysts for Enantioselective Radical Cation (4+2) Cycloaddition toward Natural Product Synthesis
- 10:40-11:00 **OB03** **Yuri Takagi, Ryoya Tajima, Takaaki Saito, Natsuki Mizuno, Takayoshi Arai**  
Gearing Effects of Substituents on Pyridine-Metal-Catalyzed Asymmetric Reactions

- 11:00-11:20 **OB04** Yuta Nakagawa, Naoki Watari, Tatsuya Uchida  
Preparation of optically pure H/D isotopic chiral molecule from its racemic mixture via asymmetric C–H functionalization
- 11:20-11:40 **OB05** Suguru Matsuoka, Eri Soga, Tomoki Ozaki, Kazunobu Igawa, Kohei Ogawa, Yuki Yoshida, Shusaku Asano, Michiya Fujiki, Katsuhiko Tomooka, Toshiyuki Hamura  
Synthesis and Chiral Properties of (1,10)-Anthracenophane

—Poster Session A and Lunch—

12:30-13:10 **Lunch Seminar (Shimadzu Corporation)**

Shinnosuke Horie

Benefits of fully automated HPLC/SFC switching system for enantiomeric separations

*Chair: Naoki Ishida*

- 14:10-14:30 **OB06** Kazunobu Igawa, Katsuhiko Tomooka  
Asymmetric Synthesis of Functionalized Chiral Silicon Molecules
- 14:30-14:50 **OB07** Yoshihiro Sohtome, Mikiko Sodeoka  
Dynamic Catalytic Diastereoconvergent (3 + 2) Cycloaddition of alpha-Keto Ester Enolates with Isomerizable Nitrones
- 14:50-15:10 **OB08** Masahiro Terada, Taishi Nakanishi  
Computational Molecular Refinement to Enhance Enantioselectivity by Reinforcing Hydrogen Bonding Interactions in Major Reaction Pathway
- 15:10-15:30 **OB09** Yuuya Kawasaki, Kazunobu Igawa, Katsuhiko Tomooka  
Preparation of Enantioenriched Chiral Molecules based on DYASIN

—Coffee Break—

*Chair: Kenji Monde*

- 15:50-16:10 **OB10** Ina Varfaj, Magdaléna Labíková, Andrea Carotti, Roccaldò Sardella, Jiří Svoboda, Wolfgang Lindner, Leonid Asnin, Michal Kohout  
Advances in the design of ion exchange-type chiral stationary phases and understanding of their chiral recognition mechanisms
- 16:10-16:30 **OB11** Xiao Dai, Fan Wang, Jun Shen, Yoshio Okamoto  
Polysaccharide Derivatives Bearing Bulky Pendants for High-Efficient Enantioselective Fluorescent Sensing
- 16:30-16:50 **OB12** Anka Hagelschuer, Damián Padín, Vanda Dašková, Ben L. Feringa  
Uncovering the Self-Enantioresolving Properties of Chiral Amine Derivatives. Applications in Asymmetric Synthesis and Catalysis

16:50-17:10 **OB13** Takashi Kikuchi, Hiroyasu Sato, Takashi Matsumoto, Keiyo Nakai, Mitsuhiisa Yamano  
Electron Diffraction Crystallography (MicroED) for Absolute Structure Determination from Nanometer-sized Crystal Samples

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## Aug. 28 (Wed)

### Room A

9:00-9:50 **PL04** Minghua Liu  
Supramolecular chirality and circularly polarized luminescence in nanoassemblies  
*Chair: Félix Freire*  
  
*Chair: Takeharu Haino*

10:00-10:30 **KN08** Bart Kahr, Miriam Rossi  
*L'inversione di Walden: Primo Levi's Undergraduate Thesis*

10:30-11:00 **KN09** Xinhua Wan  
Revisiting Pasteur's Separation Experiment

11:00-11:20 **OA03** Sjoerd W. van Dongen, Anne-Sophie Léonard, Willem L. Noorduin  
Chiral amplification during crystallization

11:20-11:40 **OA04** S. Furkan Ozturk  
A New Spin on the Origin of Biological Homochirality

—Poster Session B and Lunch—

*Chair: Toru Asashi*

14:10-14:40 **KN10** Jeanne Crassous  
Chirality and multifunctionality in helicene-based chemical platforms

14:40-15:10 **KN11** Reiko Oda  
Interplay between order and disorder for the chirality expression in mesoscopic and hierarchical chiral objects

15:10-15:40 **KN12** Mark J. MacLachlan  
Responsive Photonic Materials from the Chiral Assembly of Cellulose Nanocrystals

—Coffee Break—

16:00-16:20 *Award Ceremony*

16:20-17:20 **AW02** **Katsuhiro Maeda**  
Precise Synthesis of Helical Polyacetylenes and Their Unique Functions as  
Chiral Materials  
*Chair: Toshikazu Takata*

18:30-21:00 **Banquet @Hotel Granvia Kyoto**

## Room B

*Chair: Katsuhiro Maeda*

- 10:00-10:20 **OB14** **Wei Xu, Ayami Takeda, Naoya Kumagai**  
Quinoline-Based Oligoamides Featuring Helical Folding
- 10:20-10:40 **OB15** **Julian Bergueiro, Jose María Martínez-Parra, Rebeca Gómez-Ojea, Alejandro Fiel, Fernando Bordallo, Javier Montenegro**  
 $\alpha$ -Helical Chiral Exo-Topologies in Peptide Assembly
- 10:40-11:00 **OB16** **Fumio Sanda, Mio Hosotani, Taichi Sotani, Hiromitsu Sogawa**  
Synthesis of Bipyridine-Containing Optically Active  $\pi$ -Conjugated  
Polymers Derived from Amino Alcohols
- 11:00-11:20 **OB17** **Siliang Cai, Yihan Huang, Sheng Wang, Jie Zhang, Xinhua Wan**  
Allosteric Self-assembly of Amphiphilic Helical Poly(phenylacetylene)s
- 11:20-11:40 **OB18** **Mohamed I.A. Ibrahim, Mahmoud E. Esmael, Abdelrahman M. Khattab, Koichi Matsuo**  
Polyhydroxyalkanoates: Production, Identification, and Characterization  
with Insights from Circular Dichroism

—Poster Session B and Lunch—

*Chair: Yasuhiro Morisaki*

- 14:10-14:30 **OB19** **Yoshiaki Shoji, Takanori Fukushima**  
Boron-Mediated C–C Bond Formation Reactions for the Construction of  
Three-Dimensional Chiral Molecular Frameworks
- 14:30-14:50 **OB20** **Mihoko Yamada, Masato Nishi, Pablo Reine, Shouhei Katao, Yoshiko Nishikawa, Takuya Nakashima, Tsuyoshi Kawai**  
Photochromism of a Tetrathiazole-based Bis-terpyridine Folded Ligand with  
Chirality and its Iron(II) Complex
- 14:50-15:10 **OB21** **Tadashi Mori**  
Exploring Symmetry's Role in the Chiroptical Properties of Double  
Helicenes
- 15:10-15:30 **OB22** **Kenichi Kato, Tomoya Kaneda, Shunsuke Ohtani, Tomoki Ogoshi**  
Alignment of Chirality and Conformations in Pillar[n]arenes

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**Aug. 29 (Thu)**

**Room A**

*Chair: Tadashi Ema*

- 9:00-9:30    **KN13**    **Shiki Yagai**  
Inversion of Supramolecular Chirality of an Azobenzene Dimer by Photo-Regulated Supramolecular Polymerization Condition and Nucleation Kinetics
- 9:30-10:00    **KN14**    **Tomoki Ogoshi**  
Chiral Supramolecular Assemblies Based on Planar-Chiral Pillar[*n*]arenes

—Coffee Break—

*Chair: Kazuhiko Saigo*

- 10:20-10:40    **OA05**    **Takeharu Haino**  
Helical Supramolecular Polymer of Tetrakisporphyrin with Controlled Handedness
- 10:40-11:00    **OA06**    **Attila Mándi, Sándor Balázs Király, Máté Kicsák, Tibor Kurtán**  
Domino cyclization reactions and chiroptical analysis of heterocycles
- 11:00-11:30    **KN15**    **Takashi Ooi**  
Toward Catalytic Control of Photoinduced Radical Reactions
- 11:50-12:40    **PL05**    **Chulbom Lee**  
Total Synthesis of Complex Natural Products via Novel Catalysis  
*Chair: Katsuhiko Tomooka*
- 12:40-13:00    **Closing Ceremony**

**Room B**

*Chair: Reiko Kuroda*

- 9:00-9:20    **OB23**    **Hiroshi Izumi, Laurence A. Nafie, Rina K. Dukor**  
Supersecondary Structure Code for Conformational Analysis of Protein and RNA Molecules
- 9:20-9:40    **OB24**    **Jérémie Topin, Matej Hladiš, Maxence Lalis, Samar Abi Khalil, Sébastien Fiorucci**  
How chirality affects the sense of smell ? A study by a combination of AI and sensory analysis.

9:40-10:00 **OB25** **Aihua Qu, Maozhong Sun, Liguang Xu, Hua Kuang, Chuanlai Xu**  
Chiral nano-adjuvants and interorgan immune regulation

—Coffee Break—

*Chair: Katsuya Inoue*

10:20-10:40 **OB26** **Vanessa Leyva, Jana Bocková, Manuel Robert, Adrien Garcia, Jérémie Topin, Nykola C. Jones, Søren V. Hoffmann, Cornelia Meinert**  
Is the Enantiomeric Excess in Meteorites (*truly*) the Missing Link to Understanding Biomolecular Homochirality?

10:40-11:00 **OB27** **Agnes Banreti, Shayon Bhattacharya, Frank Wien, Damien Thompson, Stéphane Noselli**  
Biological Effects of the Loss of Homochirality in a Multicellular Organism

11:00-11:20 **OB28** **Jatish Kumar**  
Circular Dichroism and Circularly Polarized Luminescence in Optically Active Downconversion and Upconversion Nanoparticles

11:20-11:40 **OB29** **Ventsislav K. Valev**  
Hyper-Raman optical activity: predicted in 1979 and demonstrated 45 years later