

## June 24, Saturday

Opening remarks: 9:00–9:10 Hitoshi Tamiaki (Chairman, *Ritsumeikan Univ.*)

**PL-1** 9:10–10:00 (Chairperson: H. Tamiaki, *Ritsumeikan Univ.*)  
Opto-Electronic and Excited-State Dynamical Properties of Chiral,  
Semiconducting Polymer-Wrapped Single-Walled Carbon Nanotube  
Superstructures  
Michael J. Therien  
*Duke Univ., Durham, NC, United States*

**O-1** 10:00–10:30 (H. Tamiaki)  
Molecular Modules for Framework Catalysts  
Mio Kondo  
*Inst. Mol. Sci., Okazaki, Japan; ACT-C, JST, Kawaguchi, Japan*

Coffee break: 10:30–10:40

**O-2** 10:40–11:00 (Chairperson: M. J. Therien, *Duke Univ.*)  
Controlling of Carrier Dynamics in a Nanocrystal with Programmed Structure  
Masanori Sakamoto  
*Kyoto Univ., Uji, Japan*

**O-3** 11:00–11:30 (Therien)  
Photo-Energy Conversion in Lanthanide-Based Interfacial Coordination  
Nanoparticles  
Ayumi Ishii, Miki Hasegawa  
*Aoyama Gakuin Univ., Sagamihara, Japan*

**S-1** 11:30–11:40 (Therien)  
**(P-1)** Synthesis of Chlorophyll-*a* Derivatives Possessing the 3<sup>2</sup>-Carboxy and  
17<sup>2</sup>-Carbamoyl Groups and Their Application for DSSC  
Yuxiao Cui, Shin Ogasawara, Wenjie Zhao, Xiaofeng Wang, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan; Jilin Univ., Changchun, China*

**S-2** 11:40–11:50 (Therien)  
**(P-15)** Highly Anion-Responsive  $\pi$ -Electronic Molecules by Conjunction of Pyrrole and  
Amide Moieties  
Atsuko Kuno, Hiromitsu Maeda  
*Ritsumeikan Univ., Kusatsu, Japan*

Group Photo: 11:50

Lunch: 12:00–13:00

Poster session: 13:00–14:30 (K309)

Odd number poster presenters, please stand by during 13:00–13:45.

Even number poster presenters, please stand by during 13:45–14:30.

- O-4** 14:40–15:20 (Chairperson: Y. Kinoshita, *Ritsumeikan Univ.*)  
Structure of the Light-harvesting Baseplate from Green Sulfur Bacteria and Applications of Pigments from Photosynthetic Bacteria  
Niels-Ulrik Frigaard  
*Univ. Copenhagen, Helsingør, Denmark*
- O-5** 15:20–15:50 (Kinoshita)  
Molecular Assembly of Bacterial Photosynthetic Membrane Protein-Pigment Complexes onto Electrodes  
Masaharu Kondo  
*Nagoya Inst. Tech., Nagoya, Japan*
- O-6** 15:50–16:10 (Kinoshita)  
Development of a Novel Measurement System for Magneto-Chiral Dichroism Using a Pulsed Electromagnet: Observation of Magneto-Chiral Dichroism of Chiral J-Aggregates of a Zinc Chlorin  
Shingo Hattori, Yusuke Yamamoto, Tomohiro Miyatake, Kazuyuki Ishii  
*Univ. Tokyo, Meguro, Japan; Ryukoku Univ., Otsu, Japan*

Coffee break: 16:10–16:20

- O-7** 16:20–16:50 (Chairperson: N.-U. Frigaard, *Univ. Copenhagen*)  
New Chlorophyll Properties in Photosynthetic Reaction  
Tatsuya Tomo, Reona Toyofuku, Toshiyuki Shinoda, Seiji Akimoto  
*Tokyo Univ. Sci., Shinjuku, Japan; Kobe Univ., Kobe, Japan*
- O-8** 16:50–17:20 (Frgaard)  
Synthesis of Organic Compounds from CO<sub>2</sub>, H<sub>2</sub>O and Sunlight Using a Semiconductor/Metal-Complex Hybrid Catalyst  
Shunsuke Sato, Takeo Arai, Tomiko M. Suzuki, Takeshi Morikawa  
*Toyota Central R&D Labs., Inc., Nagakute, Japan*
- O-9** 17:20–17:50 (Frgaard)  
Quasi-Two-Photon Absorption Behaviors with Synergetic Coupling of Fast Photochromic Reactions  
Yoichi Kobayashi, Katsuya Mutoh, Jiro Abe  
*Ritsumeikan Univ., Kusatsu, Japan; Aoyama Gakuin Univ., Sagamihara, Japan*

Closing remarks: 17:50–18:00 Hiromitsu Maeda (*Ritsumeikan Univ.*)

Banquet: 18:10– K309

## Poster Session (K309)

Please mount your poster by the noon of June 24 and stand by it during the following time: odd number, 13:00–13:45; even number, 13:45–14:30.

- P-1** Synthesis of Chlorophyll-*a* Derivatives Possessing the 3<sup>2</sup>-Carboxy and 17<sup>2</sup>-Carbamoyl Groups and Their Application for DSSC  
Yuxiao Cui, Shin Ogasawara, Wenjie Zhao, Xiaofeng Wang, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan; Jilin Univ., Changchun, China*
- P-2** Synthesis and Stereochemical Stability of C13<sup>2</sup>-Substituted Chlorophyll-*a* Derivatives  
Yuki Egami, Shin Ogasawara, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-3** Self-Aggregation of Chlorophyll Derivatives Possessing a Methyl Group at the 13<sup>2</sup>-Position  
Yoshiki Fujiwara, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-4** Regulation of the Occupancy of B800 Bacteriochlorophyll *a* in Light-Harvesting Complex 2 from a Purple Photosynthetic Bacterium *Rhodoblastus acidophilus*  
Yoshitaka Saga, Yoshitaka Fukuda  
*Kindai Univ., Higashi-Osaka, Japan; PRESTO, JST, Kawaguchi, Japan*
- P-5** Synthesis and Physical Properties of Chlorophyll Derivatives Bearing a Quinonoid Moiety at the C3-Position as Diels-Alder Adducts  
Naoya Funayama, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-6** Dimension-Controlled Assemblies Based on Genuine  $\pi$ -Electronic Ions  
Yohei Haketa, Yuya Bando, Hiromitsu Maeda  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-7** Effects of Cesium Iodide or Tin Bromide Addition to Perovskite-Based CH<sub>3</sub>NH<sub>3</sub>Pb<sub>0.95</sub>As<sub>0.05</sub>I<sub>3-x</sub>Cl<sub>x</sub> Photovoltaic Devices  
Tsuyoshi Hamatani, Takeo Oku  
*Univ. Shiga Pref., Hikone, Japan*
- P-8** Dipyrrolyldiketone-Based Anion Receptors: Efficient Building Blocks for Ion-Pairing Assemblies and Catalytic Activity  
Goki Hirata, Hiromitsu Maeda  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-9** Microemulsion-Type Aqueous Aggregates Prepared with Co-Assemblies of Amphiphilic and Lipophilic Zinc Chlorins  
Tomohiro Miyatake, Ryota Hokoyama, Hitoshi Tamiaki  
*Ryukoku Univ., Otsu, Japan; Ritsumeikan Univ., Kusatsu, Japan*

- P-10** “Up-Hill” Self-Assembly in Designed Flow Microspace  
Shingo Kaji, Akiko Sato, Takuya Nakadozono, Rie Nogami, Munenori Numata  
*Kyoto Pref. Univ., Kyoto, Japan*
- P-11** Synthesis and Ion-Pairing Assemblies of Cyclic Anion-Responsive  $\pi$ -Electronic Molecules  
Shunsuke Kaname, Hiromitsu Maeda  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-12** Synthesis, Optical Properties and DFT Calculation of 3,8-Divinyl-13<sup>2</sup>,17<sup>3</sup>-Cyclophosphoribide-*a* Enol  
Yusuke Kinoshita, Yuichi Kitagawa, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan; Hokkaido Univ., Sapporo, Japan*
- P-13** Visible Luminescent Lanthanide Ions and a Large  $\pi$ -Conjugated Ligand System Shake Hands  
Yuichi Kitagawa, Ryohsuke Ohno, Fumiya Suzue, Takayuki Nakanishi, Koji Fushimi, Yasuchika Hasegawa  
*Hokkaido Univ., Sapporo, Japan*
- P-14** Anion-Responsive  $\pi$ -Electronic Systems with Orthogonally Introduced  $\pi$ -Moiety  
Naoya Koda, Hiromitsu Maeda  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-15** Highly Anion-Responsive  $\pi$ -Electronic Molecules by Conjunction of Pyrrole and Amide Moieties  
Atsuko Kuno, Hiromitsu Maeda  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-16** Self-Aggregation of Synthetic Bacteriochlorophyll-*d* Analogues Possessing Various Substituents at C8-Position  
Shogo Matsubara, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-17** Effects of Gold Nanoparticle on Photocatalytic Behavior of Titanium Oxide Ultra Thin-Film  
Shota Mitsukawa, Tsuyoshi Akiyama, Takeo Oku  
*Univ. Shiga Pref., Hikone, Japan*
- P-18** Anion-Responsive  $\pi$ -Electronic Systems That Exhibit Tautomerization  
Yuta Morimoto, Yohei Haketa, Hiromitsu Maeda  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-19** Synthesis of Space-Controllable Anion-Responsive  $\pi$ -System Dimers  
Atsushi Naganawa, Hiromitsu Maeda  
*Ritsumeikan Univ., Kusatsu, Japan*

- P-20** Synthesis of *N*-Methylated Chlorin Stabilizing DNA Quadruplex  
Yasunobu Nagano, Tamaki Endoh, Shin Ogasawara, Naoki Sugimoto, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan; Konan Univ., Kobe, Japan*
- P-21** Pyrrole-Based Liquid Crystalline Assemblies Exhibiting Electric-Field Responses  
Kazuto Nakamura, Hiromitsu Maeda  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-22** Photoreactive Superhydrophobic Surfaces: Inspired by Surface Structure of a Termite Wing  
Ryo Nishimura, Yoshimune Nonomura, Hiroyuki Mayama, Satoshi Yokojima, Shinichiro Nakamura, Kingo Uchida  
*Ryukoku Univ., Otsu, Japan; Yamagata Univ., Yonezawa, Japan; Asahikawa Med. Univ., Asahikawa, Japan; Tokyo Univ. Pharm. Life Sci., Hachioji, Japan; RIKEN, Wako, Japan.*
- P-23** Temperature-Dependent Aggregation Behavior of Chlorophyll Derivatives Introduced into a Lipid Bilayer  
Tomohiro Miyatake, Noriaki Nishimura  
*Ryukoku Univ., Otsu, Japan*
- P-24** Fabrication and Characterization of AsI<sub>3</sub> Doped Perovskite-Type CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> Based Solar Cell  
Junya Nomura, Yuya Ohishi, Tsuyoshi Hamatani, Misaki Fukaya, Atsushi Suzuki, Takeo Oku  
*Univ. Shiga Pref., Hikone, Japan*
- P-25** Synthesis of Bacteriochlorophyll-*a* Analog and Its Conjugate with a Chlorin  
Yosaku Nomura, Sunao Shoji, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-26** Synthesis and Optical Properties of Chlorophyll Derivatives Linked with a Chalcone Moiety  
Kota Ohashi, Yusuke Kinoshita, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-27** Self-Associating Zwitterionic Pyrrole-Based  $\pi$ -Electronic Systems  
Takayuki Okubo, Hiromitsu Maeda  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-28** Comparison of the Qy Absorption Bands of Bacteriochlorophyll *a* in LH2 Proteins Derived from Three Purple Photosynthetic Bacteria, *Rhodoblastus acidophilus*, *Phaeospirillum molischianum*, and *Rhodobacter sphaeroides*  
Yoshitaka Saga, Keiya Hirota  
*Kindai Univ., Higashi-Osaka, Japan; PRESTO, JST, Kawaguchi, Japan*

- P-29** Construction of Solid-State Chlorophyll-Based Solar Cells  
Kotowa Sakai, Yue Li, Wenjie Zhao, Mengzhen Li, Gang Chen, Xiao-Feng Wang, Xueqi Fu, Hitoshi Tamiaki, Toshitaka Ikeuchi, Shin-ichi Sasaki  
*Nagahama Inst. Bio-Sci. Tech., Nagahama, Japan; Jilin Univ., Changchun, China; Ritsumeikan Univ., Kusatsu, Japan*
- P-30** Free-Base Chlorophyll and Bacteriochlorophyll Derivatives as Electron Donor for Organic Solar Cells  
Shin-ichi Sasaki, Shengnan Duan, Guo Chen, Mengzhen Li, Gang Chen, Kotowa Sakai, Toshitaka Ikeuchi, Hitoshi Tamiaki, Xiao-Feng Wang  
*Nagahama Inst. Bio-Sci. Tech., Nagahama, Japan; Ritsumeikan Univ., Kusatsu, Japan; Jilin Univ., Changchun, China*
- P-31** Synthesis of  $\pi$ -Electronic Anions That Form Ion-Pairing Assemblies  
Yoshifumi Sasano, Hiromitsu Maeda  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-32** Effect of Mn Doping into Perovskite Crystals on Electronic Structures and Magnetic Properties for Solar Cell Applications  
Atsushi Suzuki, Takeo Oku  
*Univ. Shiga Pref., Hikone, Japan*
- P-33** Fabrication and Characterization of Perovskite Solar Cells Doped with Mn  
Masaya Taguchi, Yuya Ohishi, Atsushi Suzuki, Takeo Oku  
*Univ. Shiga Pref., Hikone, Japan*
- P-34** Ion-Pairing Assemblies of  $\pi$ -Electronic Anions Stabilized by Intramolecular Hydrogen Bonding  
Yuka Takeda, Hiromitsu Maeda  
*Ritsumeikan Univ., Kusatsu, Japan*
- P-35** Stabilities of  $\text{CH}_3\text{NH}_3\text{PbI}_3$ -Based Perovskite Structures  
Hiroki Tanaka, Naoki Ueoka, Takeo Oku  
*Univ. Shiga Pref., Hikone, Japan*
- P-36** New Insights into the Stereoselective Dehydrogenation Process in the Biosynthesis of Bacteriochlorophyll *a*  
Misato Teramura, Yusuke Tsukatani, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan; JAMSTEC, Yokosuka, Japan*
- P-37** Synthesis of Arylethynyl-Substituted Anion-Responsive  $\pi$ -Electronic Systems Providing Dimension-Controlled Assemblies  
Yuta Watanabe, Hiromitsu Maeda  
*Ritsumeikan Univ., Kusatsu, Japan*

- P-38** Hole Blocking Effect of C<sub>60</sub>-Ethylenediamine Adduct on Organic Thin-Films Solar Cells  
Atsutaka Yamada, Tsuyoshi Akiyama, Daisuke Izumoto, Atsushi Suzuki, Takeo Oku  
*Univ. Shiga Pref., Hikone, Japan*
- P-39** Fabrication and Characterization of Perovskite-Type CH<sub>3</sub>NH<sub>3</sub>Pb<sub>1-x</sub>Sb<sub>x</sub>I<sub>3-2x</sub>Br<sub>3x</sub> Photoelectric Devices  
Jun Yamanouchi, Yuya Ohishi, Misaki Fukaya, Atsushi Suzuki, Takeo Oku  
*Univ. Shiga Pref., Hikone, Japan*