

## June 29, Saturday

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

**PL-1** 9:10-10:10 (Chairperson: H. Tamiaki, *Ritsumeikan Univ.*)  
Breakdown of Chlorophyll – Source of Blue Luminescent Tetrapyrroles  
Bernhard Kräutler  
*Univ. Innsbruck, Innsbruck, Austria*

Coffee break: 10:10-10:30

**O-1** 10:30-11:00 (Chairperson: B. Kräutler, *Univ. Innsbruck*)  
A Chlorophyll Catabolism by Heterotrophic/Phototrophic Protists  
Yuichiro Kashiya, Akiko Yokoyama, Yusuke Kinoshita, Takashi Shiratori,  
Tadashi Mizoguchi, Hitoshi Tamiaki  
*Fukui Univ. Tech., Fukui, Japan; PRESTO, JST, Tokyo, Japan; Ritsumeikan Univ.  
Kusatsu, Japan; Univ. Tsukuba, Tsukuba, Japan*

**S-1** 11:00-11:10 (Kräutler)  
**(P6)** Encapsulation of a Ruthenium(II) Polypyridine Unit in the Cage Compound  
Tsubasa Hatanaka, Kohei Oda, Kanae Hara, Takahiro Aoki, Kojiro Nagata,  
Tomohiko Inomata, Tomohiro Ozawa, Hideki Masuda, Yasuhiro Funahashi  
*Osaka Univ., JST-PRESTO, Toyonaka, Japan; Nagoya Inst. Tech., Nagoya, Japan*

**S-2** 11:10-11:20 (Kräutler)  
**(P26)** Green Luminescence of Sol-Gel Derived Tb<sup>3+</sup>-Doped GeO<sub>2</sub>-ZrO<sub>2</sub> Thin Films  
Tomoe Sanada, Masashi Abe, Kazuhiro Yamamoto, Noriyuki Wada, Kazuo  
Kojima  
*Ritsumeikan Univ., Kusatsu, Japan; Ind. Res. Center Shiga Pref., Rittou, Japan;  
Suzuka Natl. Coll. Tech., Suzuka, Japan*

**S-3** 11:20-11:30 (Kräutler)  
**(P30)** Synthesis and Characterization of a Hydrophobic Vitamin B<sub>12</sub> Model Complex  
Having a Co-S Bond  
Keishiro Tahara, Ayaka Matsuzaki, Takahiro Masuko, Jun-ichi Kikuchi, Yoshio  
Hisaeda  
*Kyushu Univ., Fukuoka, Japan; NAIST, Ikoma, Japan*

Group Photo: 11:30

Lunch: 11:30-12:30

Poster session: 12:30-14:00 (K304 and K305. Odd number poster presenters, please stand by during 12:30-13:15. Even number poster presenters, please stand by during 13:15-14:00.)

- O-2** 14:10-14:50 (Chairperson: H. Maeda, Ritsumeikan Univ.)  
Light-Harvesting and Energy Migration in Metal-Organic Frameworks (MOFs) and QD-MOF Assembly  
Ho-Jin Son, Shengye Jin, Omar K. Farha, Gary P. Wiederrecht, Joseph T. Hupp  
*Northwestern Univ., Evanston, USA; Argonne National Lab., Argonne, USA*
- O-3** 14:50-15:20 (Maeda)  
Fabrication of Hybrid Mesoporous Materials for Bioanalysis  
Akira Yamaguchi  
*Ibaraki Univ., Mito, Japan*
- O-4** 15:20-15:50 (Maeda)  
Alteration of Light-Harvesting Complexes in Green Photosynthetic Bacteria by Biosynthetic Reactions  
Yoshitaka Saga  
*Kinki Univ., Higashi-Osaka, Japan*

Coffee break: 15:50-16:10

- O-5** 16:10-16:40 (Chairperson: H. -J. Son, *Northwestern Univ.*)  
Crystal-Free Crystallography Using Crystalline Sponges  
Yasuhide Inokuma  
*Univ. Tokyo, Tokyo, Japan*
- O-6** 16:40-17:10 (Son)  
Supramolecular Chemistry in a Programmed Microspace  
Munenori Numata  
*Kyoto Pref. Univ., Kyoto, Japan*
- O-7** 17:10-17:40 (Son)  
Photocatalytic CO<sub>2</sub> Reduction by Ruthenium-Peptide Complexes  
Yusuke Kuramochi, Hitoshi Ishida  
*Kitasato Univ., Sagamihara, Japan; PRESTO, JST, Kawaguchi, Japan*

Closing remarks; 17:40-17:50 Hiromitsu Maeda (*Ritsumeikan Univ.*)

Banquet: 18:00- (3F) Epoch Lounge

## Poster Session (K304 and K305)

Please mount your poster by the noon of June 29 and stand by it during the following time: odd number, 12:30-13:15; even number, 13:15-14:00.

- P1** Optical and Chemical Properties of Synthetic Chlorophyll Derivatives Possessing Various 3- and 20-Substituents  
Hitoshi Tamiaki, Nobutaka Arika, Tomohiro Miyatake  
*Ritsumeikan Univ., Kusatsu, Japan; Ryukoku Univ., Otsu, Japan*
- P2** Assembled Structures of Ion-Responsive and Ionic  $\pi$ -Systems  
Yuya Bando, Hiromitsu Maeda  
*Ritsumeikan Univ., Kusatsu, Japan*
- P3** Facile Fabrication of [60]Fullerene-Diamine Assembly Using an Alternate Immersion Process and Its Photovoltaic Application  
Shoto Banya, Taisuke Matsumoto, Takeo Oku, Tsuyoshi Akiyama  
*Univ. Shiga Pref. Hikone, Japan*
- P4** Photo-Induced Swing Mechanism of Diarylethene Crystals  
Kingo Uchida, Noriko Fujinaga, Ayaka Uyama, Akiko Sekine, Nobuhiro Yasuda, Yuko Kojima, Satoshi Yokojima, Martin Walko, Nathalie Katsonis, Ben Feringa  
*Ryukoku University, Otsu, Japan; Tokyo Inst. Tech., Tokyo, Japan; JASRI, Hyogo, Japan; Mitsubishi Chem. Group, Yokohama, Japan; Tokyo Univ. Pharam. Life Sci., Tokyo, Japan; Univ. Groningen, Groningen, Netherlands; Twente Univ., Enschede, Netherlands*
- P5** Self-Assembly of Zinc Chlorophyll Derivatives Assisted by Oligopeptides  
Tomohiro Miyatake, Yuki Hasunuma, Mikiya Watanabe  
*Ryukoku Univ., Otsu, Japan*
- P6** Encapsulation of a Ruthenium(II) Polypyridine Unit in the Cage Compound  
Tsubasa Hatanaka, Kohei Oda, Kanae Hara, Takahiro Aoki, Kojiro Nagata, Tomohiko Inomata, Tomohiro Ozawa, Hideki Masuda, Yasuhiro Funahashi  
*Osaka Univ., JST-PRESTO, Toyonaka, Japan; Nagoya, Inst. Tech., Nagoya, Japan*
- P7** Biosynthesis of Unnatural Bacteriochlorophyll *c* Esterified with Linear Alcohols Possessing Halogen in the Green Sulfur Photosynthetic Bacterium *Chlorobaculum tepidum*  
Yoshitaka Saga, Keisuke Hayashi, Tadashi Mizoguchi, Hitoshi Tamiaki  
*Kinki Univ., Higashi-Osaka, Japan; Ritsumeikan Univ., Kusatsu, Japan*
- P8** A Novel Approach Toward Size Controllable One-dimensional Structures  
Naoya Hirose, Munenori Numata  
*Kyoto Pref. Univ., Kyoto, Japan*

- P9** Analysis of the Role of the C-Terminal Segments in the Cyanobacterial Clock Protein KaiC  
Shun Isayama, Kohei Sato, Katsuaki Oyama, Kazuki Terauchi  
*Ritsumeikan Univ., Kusatsu, Japan*
- P10** Identification of the Genes Involved in Photoautotrophic Growth in Low-Oxygen Environments in Cyanobacteria  
Akira Kawano, Tsuyoshi Ozaki, Kazuma Uesaka, Kunio Ihara, Rina Aoki, Yuichi Fujita, Kazuki Terauchi  
*Ritsumeikan Univ., Kusatsu, Japan; Nagoya Univ., Nagoya, Japan*
- P11** Reactivity of Chlorophyll Derivative Possessing a Trifluoroacetylacetonate Moiety at the C3 Position with Amines  
Yusuke Kinoshita, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan*
- P12** Magneto-Chiral Dichroism Based on Exciton Chirality  
Yuichi Kitagawa, Megumi Isaji, Tomohiro Miyatake, Hitoshi Tamiaki, Kazuyuki Ishii  
*Univ. Tokyo, Tokyo, Japan; Ritsumeikan Univ., Kusatsu, Japan; Ryukoku Univ., Otsu, Japan*
- P13** Formation of Supramolecular Assemblies Based on Designed Ionic Species  
Hiromitsu Maeda, Makoto Kobayashi  
*Ritsumeikan Univ., Kusatsu, Japan*
- P14** Supramolecular Polymerization in Microfluidic Channels  
Tomohiro Kozawa, Munenori Numata  
*Kyoto Pref. Univ., Kyoto, Japan*
- P15** Fabrication and Characterization of Silicon Naphthalocyanine and Fullerene-Based Organic Solar Cells with Inverted Structures  
Haruto Maruhashi, Atsushi Suzuki, Tsuyoshi Akiyama, Takeo Oku  
*Univ. Shiga Pref., Hikone, Japan*
- P16** In vivo Reconstitution of the Cyanobacterial Circadian Clock in *Escherichia coli*  
Koya Matsuda, Sayuri Abe, Kazuki Terauchi  
*Ritsumeikan Univ., Kusatsu, Japan*
- P17** A Variety of Composite Bacteriochlorophyll Pigments in Purple Photosynthetic Bacteria  
Tadashi Mizoguchi, Megumi Isaji, Jiro Harada, Yusuke Tsukatani, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan; Kurume Univ., Kurume, Japan; PRESTO, JST, Kawaguchi, Japan*

- P18** Synthesis and Self-Aggregation of Zinc Chlorophyll Derivatives Possessing an Amino Group on the 3-Substituents  
Hitoshi Tamiaki, Tomoaki Nagai, Shinnosuke Machida  
*Ritsumeikan Univ. Kusatsu, Japan*
- P19** Fabrication and Photoelectrochemical Characterization of Permanganate – Alkyl Ammonium Hybrid LB Film  
Ryo Nishizawa, Hisanao Usami  
*Shinshu Univ., Ueda, Japan*
- P20** Synthesis of Isomeric Dihydrogeranylgeraniols  
Hitoshi Tamiaki, Kota Nomura  
*Ritsumeikan Univ., Kusatsu, Japan*
- P21** Synthesis of Amphiphilic Zinc Porphyrins Possessing a PEG Chain and Their Aggregation Behavior in Aqueous Media  
Tomohiro Miyatake, Kazuki Okada, Kanako Yamazaki, Hitoshi Tamiaki  
*Ryukoku Univ., Otsu, Japan; Ritsumeikan Univ., Kusatsu, Japan*
- P22** Fabrication and Characterization of Organic Solar Cells Using Phthalocyanines and Naphthalocyanine with Inverted Structures  
Takeo Oku, Kazumi Yoshida, Satoru Hori, Atsushi Suzuki, Tsuyoshi Akiyama, Yasuhiro Yamasaki  
*Univ. Shiga Pref., Hikone, Japan; Orient Chem. Ind. Co., Neyagawa, Japan*
- P23** Fabrication and Photoelectrochemical Characterization of Iron Oxide Langmuir-Blodgett Film  
Eiji Okuno, Hisanao Usami  
*Shinshu Univ., Ueda, Japan*
- P24** Shape Changing of C<sub>60</sub>-Ethylenediamine Adducts  
Yuji Ono, Tsuyoshi Akiyama, Takeo Oku  
*Univ. Shiga Pref., Hikone, Japan*
- P25** Molecular Mechanism Involved in the Synchronization of the Circadian KaiC Rhythm  
Katsuaki Oyama, Kazuki Nagata, Kazuma Umehara, Kazuki Terauchi  
*Ritsumeikan Univ., Kusatsu, Japan*
- P26** Green Luminescence of Sol-Gel Derived Tb<sup>3+</sup>-Doped GeO<sub>2</sub>-ZrO<sub>2</sub> Thin Films  
Tomoe Sanada, Masashi Abe, Kazuhiro Yamamoto, Noriyuki Wada, Kazuo Kojima  
*Ritsumeikan Univ., Kusatsu, Japan; Ind. Res. Center Shiga Pref., Rittou, Japan.; Suzuka Natl. Coll. Tech., Suzuka, Japan*

- P27** Synthetic Study of Carboxylated Chlorins for Application to Dye-Sensitized Solar Cells  
Shin-ichi Sasaki, Xiao-Feng Wang, Toshitaka Ikeuch, Hitoshi Tamiaki  
*Nagahama Inst. Bio-Sci. Tech., Nagahama, Japan; Ritsumeikan Univ., Kusatsu, Japan; Yamagata Univ., Yonewawa, Japan*
- P28** Tubular Supramolecules of Natural Bacteriochlorophylls-*c* and Their Synthetic Analogs  
Sunao Shoji, Tadashi Mizoguchi, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan*
- P29** Fabrication and Characterization of Poly(copper phthalocyanine)-Based Solar Cells  
Atsushi Suzuki, Makoto Iwase, Tsuyoshi Akiyama, Takeo Oku  
*Univ. Shiga Pref., Hikone, Japan*
- P30** Synthesis and Characterization of a Hydrophobic Vitamin B<sub>12</sub> Model Complex Having a Co-S Bond  
Keishiro Tahara, Ayaka Matsuzaki, Takahiro Masuko, Jun-ichi Kikuchi, Yoshio Hisaeda  
*Kyushu Univ., Fukuoka, Japan; NAIST, Ikoma, Japan*
- P31** Autooxidation of the Exo Five-Membered E-Ring of Chlorophyll Derivatives by Action of Titanium Oxide in the Dark  
Naoya Takahashi, Yoshitaka Saga  
*Kinki Univ., Higashi-Osaka, Japan*
- P32** Photochemistry and Electrochemistry of Synthetic 3-, 8- and/or 13-Carbonylated Chlorophyll-*a* Derivatives  
Hitoshi Tamiaki, Takuya Tanaka, Xiao-Feng Wang  
*Ritsumeikan Univ., Kusatsu, Japan; Yamagata Univ., Yonezawa, Japan*
- P33** Bacteriochlorophyll Homolog Composition Analyses in Mutants of Green Sulfur Bacteria  
Yusuke Tsukatani, Jiro Harada, Tadashi Mizoguchi, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan; PRESTO, JST, Kawaguchi, Japan; Kurume Univ., Kurume, Japan*
- P34** Synthesis of Chlorophyll Derivatives Possessing a Pyridyl or Polypyridyl-Ethynyl Group at the C3 Position  
Youhei Yamamoto, Hitoshi Tamiaki  
*Ritsumeikan Univ., Kusatsu, Japan*