

July 10, Friday

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

PL-1 9:10-10:00 (Chairperson: H. Tamiaki, *Ritsumeikan Univ.*)
Photophysics and Dynamics in Coordinatively Assembled Porphyrin Structures
Joseph T. Hupp
Northwestern Univ., Evanston, USA

O-1 10:00-10:30 (H. Tamiaki, *Ritsumeikan Univ.*)
Optimization of Natural Chlorin Macrocycle for Efficient Dye-Sensitized Solar Cells
Xiao-Feng Wang, Shin-ichi Sasaki and Hitoshi Tamiaki
Gifu Univ., Gifu, Japan; Ritsumeikan Univ., Kusatsu, Japan; Nagahama Inst. Bio-Sci. Tech., Nagahama, Japan

Coffee break: 10:30-11:00

O-2 11:00-11:30 (Chairperson: J. T. Hupp, *Northwestern Univ.*)
Synthesis and Aromaticity of Phosphorus-Containing Core-Modified Porphyrins and Their Transition-Metal Complexes
Yoshihiro Matano
Kyoto Univ., Kyoto, Japan

S-1 11:30-11:40 (J. T. Hupp, *Northwestern Univ.*)
(P28) *In vivo* Esterification of Unnatural Long Alcohols with Bacteriochlorophyllide *c* in the Green Sulfur Photosynthetic Bacterium *Chlorobium tepidum*
Yoshitaka Saga, Risato Nishimori, Tadashi Mizoguchi and Hitoshi Tamiaki
Kinki Univ., Higashi-Osaka, Japan; Ritsumeikan Univ., Kusatsu, Japan

S-2 11:40-11:50 (J. T. Hupp, *Northwestern Univ.*)
(P3) Solid-State Molecular Assemblies of π -Conjugated Acyclic Anion Receptors
Yuya Bando, Yohei Haketa, Shu Seki, Norimitsu Thonai and Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan; PRESTO, JST

S-3 11:50-12:00 (J. T. Hupp, *Northwestern Univ.*)
(P11) Structural Determination of 17-Propionate Groups of Natural Chlorophylls
Megumi Isaji, Tadashi Mizoguchi, Jiro Harada and Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan; Kurume Univ. School of Medicine, Kurume, Japan

Lunch: 12:00-13:00

Poster session: 13:00-14:30 (K304 / K305. Odd number poster presenters, please stand by during 13:00-13:45. Even number poster presenters, please stand by during 13:45-14:30.)

- IL-1** 14:30-15:10 (Chairperson: S. Inagaki, *Toyota Central R&D Labs., Inc.*)
Nano-Objects and Metal Complexes as Components for Photoinduced Processes
and Medical Applications
Luisa De Cola, Fabio Cucinotta, Cristian Strassert and Matthias Otter
Münster Univ., Münster, Germany
- O-3** 15:10-15:40 (S. Inagaki, *Toyota Central R&D Labs., Inc.*)
The TQEN (Tetrakis(2-quinolylmethylethylenediamine)) Family as Fluorescent
Zinc Sensors
Yuji Mikata
Nara Women's Univ., Nara, Japan

Coffee break: 15:40-16:00

- IL-2** 16:00-16:40 (Chairperson: L. De Cola, *Münster Univ.*)
Light-Harvesting and Photocatalysis of Mesoporous Organosilicas Bearing
Framework Chromophores
Shinji Inagaki
Toyota Central R&D Labs., Inc., Nagakute, Japan; CREST, JST
- O-4** 16:40-17:10 (L. De Cola, *Münster Univ.*)
Photoinduced Reversible Crystal Shape Changes of Photochromic Diarylethenes
Seiya Kobatake
Osaka City Univ., Osaka, Japan; PRESTO, JST

Break: 17:10-17:30

Banquet: 17:30- (1F)

July 11, Saturday

- IL-3** 9:00-9:40 (Chairperson: Andrée Kirsch-De Mesmaeker, *Univ. Libre de Bruxelles*)
Sub-20 fs Coherent Spectroscopy of Carotenoids in and out of Pigment-Protein Complexes
Hideki Hashimoto, Ritsuko Fujii, Richard J. Cogdell and Mitsuru Sugisaki
Osaka City Univ., Osaka, Japan; CREST, JST; Univ. Glasgow, Scotland, UK
- O-5** 9:40-10:10 (Andrée Kirsch-De Mesmaeker, *Univ. Libre de Bruxelles*)
Excitonic States of Huge Light-Harvesting Pigment Aggregates in Chlorosomes
Yutaka Shibata
Nagoya Univ., Nagoya, Japan

Coffee break: 10:10-10:30

- IL-4** 10:30-11:10 (Chairperson: H. Hashimoto, *Osaka City Univ.*)
Ru(II) Complexes as Electron Acceptors for Photocrosslinking Oligo-Peptides and Nucleotides
Andrée Kirsch-De Mesmaeker
Université Libre de Bruxelles, Bruxelles, Belgium
- O-6** 11:10-11:40 (H. Hashimoto, *Osaka City Univ.*)
Photo-Functions and Application of New Ruthenium Complexes Built on “Peptide Origami”
Hitoshi Ishida
Kitasato Univ., Sagamihara, Japan
- O-7** 11:40-12:10 (H. Hashimoto, *Osaka City Univ.*)
Electronic Absorption Spectroscopy of Ru(II) Polypyridyl DNA Interactions;
A Theoretical Study
D. Ambrosek, P.-F. Loos, X. Assfeld and Chantal Daniel
Université de Strasbourg, Strasbourg, France; Université Henri Poincaré, Vandoeuvre Les Nancy, France

Closing remarks; 12:10-12:20 Hiromitsu Maeda (*Ritsumeikan Univ.*)

Poster Session (K304 / K305)

Please mount your poster by the noon of July 10 and stand by it during the following time:
odd number, 13:00-13:45; even number, 13:45-14:30.

- P1** Photo-Induced Electron Transfer Reactions of a Zinc Porphyrin/Single-Walled Carbon Nanotube System
Toru Arai, Shingo Nobukuni, Atula D. Sandanayaka and Osamu Ito
Kyushu Inst. Tech., Kitakyushu, Japan; JAIST, Ishikawa, Japan; Tohoku Univ., Sendai, Japan
- P2** Chlorophyll-Derived Sensors for Alcohol/Amine Detection
Hitoshi Tamiaki, Kimiko Azuma, Michio Kunieda and Shin-ichi Sasaki
Ritsumeikan Univ., Kusatsu, Japan; Nagahama Inst. Bio-Sci. Tech., Nagahama, Japan
- P3** Solid-State Molecular Assemblies of π -Conjugated Acyclic Anion Receptors
Yuya Bando, Yohei Haketa, Shu Seki, Norimitsu Thonai and Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan; Osaka Univ., Suita, Japan; PRESTO, JST
- P4** Synthesis and Supramolecular Assemblies of Amphiphilic Acyclic Anion Receptors
Hiromitsu Maeda and Nazuki Eifuku
Ritsumeikan Univ., Kusatsu, Japan; PRESTO, JST
- P5** White-Light-Emitting Latex Hybrid with Solvatochromic Organic Dye
Mika Maeda, Masaoki Furue and Katsuhiro Sumi
Kochi Univ. Tech., Kami, Japan
- P6** Charge-by-Charge Assemblies from π -Conjugated Acyclic Anion Receptors
Yohei Haketa and Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan; PRESTO, JST
- P7** Isolation and Characterization of Various Chlorosomes from *bchU* Mutants of the Green Sulfur Bacteria *Chlorobaculum tepidum* Showing Different Composition of Bacteriochlorophylls *c* and *d*
Jiro Harada, Aaron M. Collin, Jianzhong Wen, Shunsuke Takahashi, Hirozo Oh-oka, Robert E. Blankenship and Hitoshi Tamiaki
Kurume Univ. School of Medicine, Kurume, Japan; Washington Univ., St. Louis, USA; Ritsumeikan Univ., Kusatsu, Japan; Osaka Univ., Toyonaka, Japan
- P8** Assembly of Photosynthetic Antenna Core Complex onto an ITO Electrode with a Defined Orientation
Kaori Harada, Osamu Goto, Misaki Akegawa, Masaharu Kondo, Takehisa Dewa, Kouji Iida, Hideki Hashimoto and Mamoru Nango
Nagoya Inst. Tech., Nagoya, Japan; Nagoya Municipal Industrial Res. Inst., Nagoya, Japan; CREST, JST; Osaka City Univ., Osaka, Japan
- P9** Coordination Dual Interlocked Double Helices Based on Acyclic Oligopyrroles
Takashi Hashimoto and Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan; PRESTO, JST

- P10** Self-Assembled Nanostructures Composed of Zinc Chlorins Possessing an Oxyethylene Chain
Tomohiro Miyatake, Ryoji Hirai, Fumika Sasaki and Hitoshi Tamiaki
Ryukoku Univ., Otsu, Japan; Ritsumeikan Univ., Kusatsu, Japan
- P11** Structural Determination of 17-Propionate Groups of Natural Chlorophylls
Megumi Isaji, Tadashi Mizoguchi, Jiro Harada and Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan; Kurume Univ. School of Medicine, Kurume, Japan
- P12** Creation of Artificial Chlorosome Utilizing the Unique Wrapping Properties of Helix-Forming Polysaccharides
Tohru Kano, Munenori Numata and Hitoshi Tamiaki
Kyoto Pref. Univ., Kyoto, Japan; Ritsumeikan Univ., Kusatsu, Japan
- P13** Intramolecular Excitation Energy Transfer from Visible-Absorbing Chlorophyll Derivative to Near-Infrared-Emitting Boron Dipyrromethene Moiety
Yumiko Kataoka, Michio Kunieda and Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P14** Analysis of Stereochemical Structures of Naturally Occurring Chlorophylls *c* and Synthesis of Model Compounds
Tadashi Mizoguchi, Yuki Kimura, Chihiro Nagai, Michio Kunieda and Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P15** Synthesis of Chlorophyll Attached Semi-Artificial Polysaccharide: Control of the Polymer Conformation through the Self-Assembly of Chlorophyll Side-Groups
Daiki Kinoshita, Munenori Numata, Michio Kunieda and Hitoshi Tamiaki
Kyoto Pref. Univ., Kyoto, Japan; Ritsumeikan Univ., Kusatsu, Japan
- P16** Formation of Self-Complementary Dimers of π -Conjugated Acyclic Anion Receptors
Hiromitsu Maeda and Kota Kinoshita
Ritsumeikan Univ., Kusatsu, Japan; PRESTO, JST
- P17** Ethynyl-Substituted π -Conjugated Acyclic Anion Receptors as Potential Building Subunits of Anion-Responsive Oligomers
Hiromitsu Maeda and Kanako Kitaguchi
Ritsumeikan Univ., Kusatsu, Japan; PRESTO, JST
- P18** Synthesis of Bacteriochlorophyll-*f* by Modification of Chlorophyll-*b*
Hitoshi Tamiaki, Jun Komada, Michio Kunieda, Kazuhiro Fukai, Taichi Yoshitomi, Jiro Harada and Tadashi Mizoguchi
Ritsumeikan Univ., Kusatsu, Japan; Kurume Univ. School of Medicine, Kurume, Japan
- P19** Self-Aggregation of Synthetic Zinc Chlorophylls Possessing Multi-Hydroxy Groups
Michio Kunieda, Kohei Yamamoto and Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan

- P20** Solar Cells Sensitized by Natural Dyes: Stable & Efficient?
Sergio K. Mizoguchi, Antonio Otavio T. Patrocinio, Amanda S. El-Bachá,
 Christian G. Garcia and Neyde Y. Murakami Iha
Universidade de São Paulo, São Paulo, Brazil
- P21** Molecular Devices in Energy Conversion
Neyde Yukie Murakami Iha
Universidade de São Paulo, São Paulo, Brazil
- P22** Fat and Flavor Sensing with Fluorogenic Vesicles and Cell Penetrative Peptides
 Tomohiro Miyatake, Hiroto Murata, Yasuhiko Saitoh and Stefan Matile
Ryukoku Univ., Otsu, Japan; Univ. Geneva, Geneva, Switzerland
- P23** A Novel Fluorescent Chemosensor for Mercury Involving PET and ICT Pathways
Fumie Nakagaki and Yuji Mikata
Nara Women's Univ., Nara, Japan
- P24** Synthesis and Characterization of Zinc Chlorophyll Derivatives Possessing Crown
 Ether at the 17-Position
 Yoshitaka Saga, Toshihiro Nakagawa and Hitoshi Tamiaki
Kinki Univ., Higashi-Osaka, Japan; Ritsumeikan Univ., Kusatsu, Japan
- P25** Assembly of Photosynthetic Antenna Light-Harvesting Model Polypeptides /
 Pigments Complex
Ayano Nakashima, Tsubasa Nakano, Naomi Fukui, Syunnsuke Sakai, Katsunori
 Nakagawa, Takehisa Dewa, Hideki Hashimoto and Mamoru Nango
Nagoya Inst. Tech., Nagoya, Japan; CREST, JST; Osaka City Univ., Osaka, Japan
- P26** Formation of Supramolecular Assemblies by Anion Modules
 Hiromitsu Maeda and Kazumasa Naritani
Ritsumeikan Univ., Kusatsu, Japan; PRESTO, JST
- P27** Photoisomerization of Azobenzene Gel by Supramolecular Effect
 Kingo Uchida, Shintaro Yamaguchi, Hirofumi Yamada, Masako Akazawa,
Naoki Nishikawa, Tetsuro Katayama, Yukihide Ishibashi and Hiroshi
 Miyasaka
Ryukoku Univ., Otsu, Japan; Osaka Univ., Toyonaka, Japan
- P28** *In vivo* Esterification of Unnatural Long Alcohols with Bacteriochlorophyllide *c* in
 the Green Sulfur Photosynthetic Bacterium *Chlorobium tepidum*
 Yoshitaka Saga, Risato Nishimori, Tadashi Mizoguchi and Hitoshi Tamiaki
Kinki Univ., Higashi-Osaka, Japan; Ritsumeikan Univ., Kusatsu, Japan
- P29** Synthesis of Red Chlorophyll Catabolite (RCC) and Its Analogues by
 Photo-Oxidative Ring Cleavage of Chlorophyll Derivatives
Yukihiro Okamoto and Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P30** Synthesis of Palladium Chlorophyll Derivatives Possessing Oligoarginine
 Yoshitaka Saga and Hiroshi Okazaki
Kinki University, Higashi-Osaka, Japan

- P31** Synthesis and Optical Properties of Calix[n]phyrins
Toshihiro Omagari, Motoki Toganoh and Hiroyuki Furuta
Kyushu Univ., Fukuoka, Japan
- P32** The Theoretical Study on the Photoinduced Magnetism in the Tetranuclear Iron Compound
Taku Onishi
Mie Univ., Tsu, Japan
- P33** Kinetic Analysis of Reduction of Formyl Groups in Chlorophyll *d* and Pheophytin *d*
 Yoshitaka Saga, Kana Sadaoka and Yuki Hirai
Kinki Univ., Higashi-Osaka, Japan
- P34** Synthesis and Self-Assembly of Zinc Chlorophyll Derivatives Possessing a Pyrenyl Group at the 17-Position
 Yoshitaka Saga, Aimi Sakamoto and Hitoshi Tamiaki
Kinki Univ., Higashi-Osaka, Japan; Ritsumeikan Univ., Kusatsu, Japan
- P35** Synthesis and Properties of π -Conjugated Acyclic Anion Receptors
 Hiromitsu Maeda and Shohei Sakamoto
Ritsumeikan Univ., Kusatsu, Japan; PRESTO, JST
- P36** Synthesis of Zinc Bacteriochlorophyll *d* Analogs Possessing Triethoxysilyl Group for Functionalization of Chlorosomal Supramolecules
 Yoshitaka Saga, Naoya Takahashi and Hitoshi Tamiaki
Kinki Univ., Higashi-Osaka, Japan; Ritsumeikan Univ., Kusatsu, Japan
- P37** *In vitro* Substrate Recognition of BchU, C-20 Methyltransferase: Substituent Effect of Synthetic Chlorophylls
Shunsuke Takahashi, Jiro Harada, Hirozo Oh-oka and Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan; Kurume Univ. School of Medicine, Kurume, Japan; Osaka Univ., Toyonaka, Japan
- P38** Modification at Boron Unit: Tuning Electronic and Optical Properties of π -Conjugated Anion Receptors
 Hiromitsu Maeda and Mayumi Takayama
Ritsumeikan Univ., Kusatsu, Japan; PRESTO, JST
- P39** Synthesis and Optical Properties of Ethynyl-Linked N-Confused Porphyrin Dimer
Takumi Takayama, Motoki Toganoh and Hiroyuki Furuta
Kyushu Univ., Fukuoka, Japan
- P40** A New Photochemical Oscillator on the Basis of Photoreduction of Methyl-1,4-Benzoquinone
Jichang Wang and Takashi Amemiya
Univ. Windsor, Windsor, Canada; Yokohama Nat. Univ., Yokohama, Japan