

June 18, Saturday

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

PL-1 9:10–10:00 (Chairperson: H. Tamiaki, *Ritsumeikan Univ.*)
Porphyrin supramolecular assembly for cancer imaging and therapy
Gang Zheng
Univ. Toronto, Toronto, Canada

Coffee break: 10:00–10:20

O-1 10:20–10:50 (Chairperson: G. Zheng, *Univ. Toronto, Toronto*)
Efficient supply and synthesis of unique sphingoids contained in natural resources
Yuta Murai, Kenji Monde
Hokkaido Univ., Sapporo, Japan

O-2 10:50–11:10 (Zheng)
Synthesis of chlorophyll derivatives possessing asymmetric functional groups and their stereochemistry
Shin Ogasawara, Masaki Inoshita, Yuki Egami, Misato Teramura, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan

S-1 11:10–11:20 (Zheng)
(P-19) Chlorosomal self-aggregation of synthetic chlorophyll derivatives bearing an acrylate residue along the x-axis
Shogo Matsubara, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan

S-2 11:20–11:30 (Zheng)
(P-28) Dimension-controlled assemblies of modified oligopyrrole π -systems
Kazuto Nakamura, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan

S-3 11:30–11:40 (Zheng)
(P-47) Structure and function of novel carbonyl-carotenoid bound to light-harvesting complex II from transplastomic lettuce
Nami Yamano, Kentaro Ifuku, Hideki Hashimoto, Norihiko Misawa, Ritsuko Fujii
Osaka City Univ., Osaka, Japan; Kwansei Gakuin Univ., Sanda, Japan; Kyoto Univ., Kyoto, Japan; Ishikawa Pref. Univ., Nonoichi, Japan

Group Photo: 11:40

Lunch: 11:40–12:30

Poster session: 12:30–14:00 (K309)

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-3** 14:10–14:50 (Chairperson: R. Yerushalmi, *Hebrew Univ., Jerusalem*)
X-ray crystallographic studies of active sites in oxygen-evolving photosystem II
Yasufumi Umena
Okayama Univ., Okayama, Japan
- O-4** 14:50–15:20 (Yerushalmi)
Molecular structures of water-soluble chlorophyll-binding proteins
Shigekazu Takahashi, Akira Uchida, Hiroyuki Satoh
Toyo Univ., Itakura, Japan; Toho Univ., Funahashi, Japan
- O-5** 15:20–15:40 (Yerushalmi)
Bridging the green gap by the conjugation of aromatic difluoroboron diketonate group with chlorin ring at the C3 position
Yusuke Kinoshita, Yuichi Kitagawa, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan; Hokkaido Univ., Sapporo, Japan
- Coffee break: 15:40–16:00
- O-6** 16:00–16:40 (Chairperson: H. Maeda, *Ritsumeikan Univ. Kusatsu*)
Molecular catalysts designed for water oxidation
Masaya, Okumura, Mio Kondo, Shigeyuki Masaoka
Inst. Mol. Sci., Okazaki, Japan
- O-7** 16:40–17:20 (Maeda)
Designing asymmetry at the nano scale by post-synthesis modifications;
self-processing synthesis and ex-situ doping
Roie Yerushalmi
Hebrew Univ., Jerusalem, Israel
- O-8** 17:20–17:40 (Maeda)
Ion-pairing assemblies based on “genuine” π -electronic ions
Yohei Haketa, Yuya Bando, and Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan

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

Banquet: 18:00– K309

Poster Session (K309)

Please mount your poster by the noon of Jun 18 and stand by it during the following time:
odd number, 12:30–13:15; even number, 13:15–14:00.

- P1** Fabrication of insoluble fullerene-ethylenediamine adduct thin-film toward photovoltaic application
Tsuyoshi Akiyama, Hayato Nishikawa, Takeo Oku
Univ. Shiga Pref., Hikone, Japan
- P2** Synthesis of chlorophyll *a* derivatives for reconstitution into the light-harvesting complex 2 of purple photosynthetic bacteria
Yoshitaka Saga, Kenta Amari, Kanji Miyagi
Kindai Univ., Higashi-Osaka, Japan; PRESTO, JST, Kawaguchi, Japan
- P3** Creation of kinetically stabilized porphyrin microfilms through synchronized hydrogen-bonding interactions in microflow
Yuri Nishino, Atsushi Asai, Munenori Numata
Kyoto Pref. Univ., Kyoto, Japan
- P4** Porphyrin as π -extended charged species in ion-pairing assemblies
Yuya Bando, Yohei Haketa, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P5** Synthesis of carboxylated and pyridylated chlorophyll derivatives as photosensitizers for solar cells
Yuxiao Cui, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P6** Photoinduced electron transfer reaction driven by near-infrared light using distorted phthalocyanine
Takafumi Enomoto, Mio Kondo, Shigeyuki Masaoka
Inst. Mol. Sci., Okazaki, Japan; SOKENDAI, Hayama, Japan; ACT-C, JST, Kawaguchi, Japan
- P7** Photoprotection vs photoinhibition of photosystem II intransplastomic lettuce dominantly accumulating astaxanthin
Ritsuko Fujii, Nami Yamano, Hideki Hashimoto, Norihiko Misawa, Kentaro Ifuku
Osaka City Univ., Osaka, Japan; Kwansei Gakuin Univ., Sanda, Japan; Ishikawa Pref. Univ., Nonoichi, Japan; Kyoto Univ., Kyoto, Japan
- P8** Photoisomerization of a diarylethene having perfluorocyclohexene ring in crystalline state
Eri Hatano, Masakazu Morimoto, Nobuhiro Yasuda, Satoshi Yokojima, Shinichiro Nakamura, Kingo Uchida
Ryukoku Univ., Otsu, Japan; Rikkyo Univ., Tokyo, Japan; JASRI, Sayo, Japan; Tokyo Univ. Pharm. Life Sci., Hachioji, Japan; RIKEN, Wako, Japan

- P9** Synthesis and functionalization of cyclic arylopeptoid
Masahide Hayakawa, Yukio Kitabe, Masato Ikea
Gifu Univ., Gifu, Japan
- P10** Enhancement of photoinduced reduction of a methyl viologen moiety linked with chlorophyll derivatives
Shota Hizume, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P11** Synthesis of zinc chlorophyll-*a* derivatives possessing a pyridyl group and their response to additional acids or bases
Yusuke Kamatani, Ayaka Wada, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P12** Synthesis of cyclic anion-responsive π -electronic molecules and their assemblies
Shunsuke Kaname, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P13** Roles of the metabolism producing cyclopheophorbide enols in *Euglenozoa*: an evolution from phycophagic heterotrophs to the secondary plants
Yuichiro Kashiya, Jun Kawahara, Moe Maruyama, Masami Nakazawa, Akiko Yokoyama, Takahiro Ishikawa, Toshinobu Suzaki, and Hitoshi Tamiaki
Fukui Univ. Tech., Fukui, Japan; Ritsumeikan Univ., Kusatsu, Japan
- P14** Analysis of crystal patterning of diarylethene deposited film having 1-methyl-2-phenylethyl groups
Kana Kawasaki, Hiroyuki Mayama, Tsuyoshi Tsujioka, Satoshi Yokojima, Shinichiro Nakamura, Kingo Uchida
Ryukoku Univ., Otsu, Japan; Asahikawa Med. Univ., Asahikawa, Japan; Osaka Kyoiku Univ., Kashiwara, Japan; Tokyo Univ. Pharm. Life Sci., Hachioji, Japan; RIKEN, Wako, Japan
- P15** Synthesis of chlorophyll dimers linked with a sulfide bond and their photophysical properties
Kifa Kim, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P16** Synthesis of amide-contained anion-responsive π -electronic molecules
Atsuko Kuno, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P17** Synthesis of 7-formylated chlorophyll derivatives
Makoto Kusunoki, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P18** Pyrrole-based anion-responsive π -electronic systems with multiple interaction sites
Vellanki Lakshmi, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan

- P19** Chlorosomal self-aggregation of synthetic chlorophyll derivatives bearing an acrylate residue along the x-axis
Shogo Matsubara, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P20** Generation of white-light supercontinuum by NOPA driven by regeneratively amplified Ti:sapphire laser and its application to femtosecond ultrafast transient absorption spectroscopy
Akifumi Matsumoto, Ayako Daicho, Hirofumi Nakagawa, Yutaka Nagasawa
Ritsumeikan Univ., Kusatsu, Japan; PRESTO, JST, Kawaguchi, Japan
- P21** Adsorption of palladium ion to light-harvesting complex 2 of purple photosynthetic bacteria
 Yoshitaka Saga, Kanji Miyagi Ryota Matsui
Kindai Univ., Higashi-Osaka, Japan; PRESTO, JST, Kawaguchi, Japan
- P22** CO₂ capture and photocatalytic CO₂ reduction by rhenium(I) complexes
Tatsuki Morimoto, Tomomi Kitamura
Tokyo Univ. Tech., Tokyo, Japan
- P23** Selective plasmonic optical manipulation of fluorescent organic nano sized carbocyanine dye aggregates
Ayaka Mototsuji, Tatsuya Shoji, Hiroshi Yao, Takahiro Yoshii, Kei Murakoshi, Yasuyuki Tsuboi
Osaka City Univ., Osaka, Japan; Univ. Hyogo, Kamigori, Japan; Hokkaido Univ., Sapporo, Japan
- P24** Doubly *N*-methylated porphyrinoids as new asymmetric π -electronic systems
Wakana Naito, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P25** Micro-patterning of cyanobacteria by microbubble formation based on localized surface plasmon excitation
Shota Naka, Tatsuya Shoji, Takahiro Yoshii, Kei Murakoshi, Tadashi Mizoguchi, Hitoshi Tamiaki, Yasuyuki Tsuboi
Osaka City Univ., Osaka, Japan; Hokkaido Univ., Sapporo, Japan; Ritsumeikan Univ., Kusatsu, Japan
- P26** Flowing microenvironments regulate the pitch of a semi-artificial helical polymer
 Naoya Hirose, Takuya Nakadozono, Munenori Numata
Kyoto Pref. Univ., Kyoto, Japan
- P27** Photochromism of *N,N'*-diacetyldindigo studied by femtosecond transient absorption spectroscopy
Hirofumi Nakagawa, Akifumi Matsumoto, Ayako Daicho, Yosuke Ozaki, Yutaka Nagasawa
Ritsumeikan Univ., Kusatsu, Japan; PRESTO, JST, Kawaguchi, Japan

- P28** Dimension-controlled assemblies of modified oligopyrrole π -systems
Kazuto Nakamura, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P29** Self-aggregation behavior of chlorophyll derivatives introduced into a lipid membrane
 Tomohiro Miyatake, Noriaki Nishimura, Souichi Nakayama
Ryukoku Univ., Otsu, Japan
- P30** Photoinduced formation and wettability of diarylethene microcrystalline surface with double roughness structures
Ryo Nishimura, Yoshimune Nonomura, Hiroyuki Mayama, Satoshi Yokojima, Shinichiro Nakamura, Kingo Uchida
Ryukoku Univ., Otsu, Japan; Yamagata Univ., Yonezawa, Japan; Asahikawa, Japan; Tokyo Univ. Pharm. Life Sci., Hachioji, Japan; RIKEN, Wako, Japan
- P31** Self-associating zwitterionic pyrrole-based π -electronic systems
Takayuki Okubo, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P32** Aqueous aggregates of amphiphilic metallochlorins possessing a carbonyl group
 Tomohiro Miyatake, Takaaki Sasaki, Hitoshi Tamiaki
Ryukoku Univ., Otsu, Japan; Ritsumeikan Univ., Kusatsu, Japan
- P33** Non-complexing π -electronic anions that form ion-pairing assemblies
Yoshifumi Sasano, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P34** Supramolecular nanotubes of bacteriochlorophylls-*c* and synthetic metal chlorophyll derivatives
Sunao Shoji, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P35** Optical trapping of poly(*N*-isopropylacrylamide) with a near-infrared laser tweezer: determination of polymer concentration in a polymer-rich domain
Tatsuya Shoji, Kenta Ushiro, Mitsuhiro Matsumoto, Taka-aki Asoh, Yasuyuki Tsuboi
Osaka City Univ., Osaka, Japan
- P36** Effect of metal phthalocyanine as hole-transporting materials on photovoltaic properties of perovskite solar cells
Atsushi Suzuki, Haruka Ueda, Yuki Okada, Yasuhiro Yamasaki, Takeo Oku
Univ. Shiga Pref., Hikone, Japan; Orient Chem. Ind. Co. Ltd., Osaka, Japan

- P37** Photoinduced reversible crystal growths of a diarylethene to form superhydrophilic surface
Kazuki Takase, Masakazu Morimoto, Hiroyuki Mayama, Yuko Kojima, Satoshi Yokojima, Shinichiro Nakamura, Kingo Uchida
Ryukoku Univ., Otsu, Japan; Rikkyo Univ., Tokyo, Japan; Asahikawa Med. Univ., Asahikawa, Japan; Mitsubishi Chem. Hold. Coop., Yokohama, Japan; Tokyo Univ. Pharm. Life Sci., Hachioji, Japan; RIKEN, Wako, Japan
- P38** Ion-pairing assemblies of π -electronic anions stabilized by intramolecular hydrogen bonding
Yuka Takeda, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P39** Dimension-controlled assemblies of anion-responsive π -systems
Yasunao Tani, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P40** Synthesis and optical properties of chlorophyll oligomers connected with amide bond
Tomohiro Tatebe, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P41** Stereospecific hydratases for bacteriochlorophyll synthesis regulate light-harvesting ability of chlorophyllous self-aggregates in *Chlorobaculum tepidum*
Misato Teramura, Jiro Harada, Tadashi Mizoguchi, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan; Kurume Univ., Kurume, Japan
- P42** Polymer-supported liquid phase synthesis of arylopeptoids and self-assembled nanostructures in aqueous media
Tomoya Tsuzuki, Yukio Kitabe, Masato Ikea
Gifu Univ., Gifu, Japan
- P43** Synthesis and self-aggregation of zinc 20-alkenyl chlorophyll derivatives as models of bacteriochlorophylls-*c/d*
Ayaka Wada, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P44** The chiroptical and magneto-optical properties of nonanuclear Tb(III) clusters coordinated by 16 chiral ligands
Satoshi Wada, Yuichi Kitagawa, Takayuki Nakanishi, Koji Fushimi, Yasuhiro Morisaki, Koji Fujita, Katsuaki Konishi, Katsuhisa Tanaka, Yoshiki Chujo, Yasuchika Hasegawa
Hokkaido Univ., Sapporo, Japan; Kyoto Univ., Kyoto, Japan; Kwansei Gakuin Univ., Sanda, Japan

- P45** Dimerization of synthetic zinc chlorophyll derivatives possessing an amino group in less polar organic solvents
Hiroaki Watanabe, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P46** Ion-pairing assemblies based on interlocked receptor-anion complexes
Ryohei Yamakado, Yukina Ashida, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P47** Structure and function of novel carbonyl-carotenoid bound to light-harvesting complex II from transplastomic lettuce
Nami Yamano, Kentaro Ifuku, Hideki Hashimoto, Norihiko Misawa, Ritsuko Fujii
Osaka City Univ., Osaka, Japan; Kwansei Gakuin Univ., Sanda, Japan; Kyoto Univ., Kyoto, Japan; Ishikawa Pref. Univ., Nonoichi, Japan
- P48** Analysis of bacteriochlorophylls *c* composition in the green sulfur photosynthetic bacterium *Chlorobaculum tepidum* by supplementation of perfluorodecanols
Yoshitaka Saga, Hayato Yamashita, Ryota Matsui, Keiya Hirota
Kindai Univ., Higashi-Osaka, Japan; PRESTO, JST, Kawaguchi, Japan