

June 11 (Saturday) 2022

Opening remarks: 9:30–9:40 Hitoshi Tamiaki (Chairman, Ritsumeikan Univ.)

O-1 9:40–10:20 (Chairperson: Hitoshi Tamiaki, Ritsumeikan Univ.)

Cryo-EM structure of the RC LH core complex from filamentous phototrophic bacterium *Roseiflexus castenholzii*

Long-Jiang Yu

Inst. Botany, CAS, Beijing, China

O-2 10:20–11:00 (H. Tamiaki)

Mg extraction from chlorophyll by enzymatic reaction

Hisashi Ito

Hokkaido Univ., Sapporo, Japan

Break 11:00–11:10

S-1 11:10–11:20 (Chairperson: Hajime Suzuki, Kyoto Univ.)

(P-2) Synthesis and physical properties of chlorophyll derivatives methylated at the inner ring nitrogen atom

Riko Ataka, Hitoshi Tamiaki

Ritsumeikan Univ., Kusatsu, Japan

S-2 11:20–11:30 (H. Suzuki)

(P-5) Ion-pairing assemblies of π -electronic cations based on heteroporphyrins

Masaki Fujita, Yohei Haketa, Hiromitsu Maeda

Ritsumeikan Univ., Kusatsu, Japan

S-3 11:30–11:40 (H. Suzuki)

(P-27) Synthesis and physical properties of chlorophylls bearing fluorinated substitutes at the 3-position

Suzuka Nishibori, Shin Ogasawara, Hitoshi Tamiaki

Ritsumeikan Univ., Kusatsu, Japan

Group Photo

Lunch 11:40–13:00

- O-3** 13:00–13:40 (Chairperson: Yuichi Kitagawa, Hokkaido Univ.)
Sulfolenopyrrole based pericyclic chemistry in construction of aromatic ring fused porphyrins
Chengjie Li
East China Univ. Sci. Tech., Shanghai, China

- O-4** 13:40–14:20 (Y. Kitagawa)
Synthesis and studies of benziporphyrinoids
Rima Sengupta
Ritsumeikan Univ., Kusatsu, Japan

Break 14:20–14:30

- O-5** 14:30–15:10 (Chairperson: Hiromitsu Maeda, Ritsumeikan Univ.)
Highly luminescent lanthanide complexes with π -conjugated polycyclic aromatic ligands
Yuichi Kitagawa
Hokkaido Univ., Sapporo, Japan

- O-6** 15:10–15:50 (H. Maeda)
Development of water-splitting photocatalysts using time-resolved microwave conductivity measurements
Hajime Suzuki, Ryu Abe, Akinori Saeki
Kyoto Univ., Kyoto, Japan; Osaka Univ., Suita, Japan

Break 15:50–16:00

Poster session: 16:00–18:00

Odd number poster presenters, please present your works during 16:00–17:00.

Even number poster presenters, please present your works during 17:00–18:00.

Poster Session

P-1 Optical properties of Cu-doped CdS nanocrystals

Yuzo Arima, Yoichi Kobayashi

Ritsumeikan Univ., Kusatsu, Japan

P-2 Synthesis and physical properties of chlorophyll derivatives methylated at the inner ring nitrogen atom

Riko Ataka, Hitoshi Tamiaki

Ritsumeikan Univ., Kusatsu, Japan

P-3 Peripheral modifications of charged porphyrins as building units of ion-pairing assemblies

Ryota Fujii, Hiroki Tanaka, Hiromitsu Maeda

Ritsumeikan Univ., Kusatsu, Japan

P-4 Stereoselective self-aggregation of synthetic zinc bacteriochlorophyll-*d* analogs bearing a hydrazone moiety at the 13¹-position

Satoru Fujii, Hitoshi Tamiaki

Ritsumeikan Univ., Kusatsu, Japan

P-5 Ion-pairing assemblies of π -electronic cations based on heteroporphyrins

Masaki Fujita, Yohei Haketa, Hiromitsu Maeda

Ritsumeikan Univ., Kusatsu, Japan

P-6 Optical properties of a phenothiazine derivative

Issei Fukunaga, Yoichi Kobayashi

Ritsumeikan Univ., Kusatsu, Japan

P-7 Spectral changes of B820 bacteriochlorophyll *a* in LH3 protein by exchange of detergents

Kohei Hamanishi, Yoshitaka Saga

Kindai Univ., Higashi-Osaka, Japan

- P-8** Temperature-dependent self-aggregation of zinc bacteriochlorophyll-*d* analogs with a branched alkyl chain at the 17-propionate residue
Nobuyuki Hara, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P-9** Synthesis and photophysical properties of a Eu(III) coordination polymer with unsymmetric linker
Miyu Harukawa, Hideaki Takano, Tsuyoshi Mita, Sunao Shoji, Koji Fushimi, Yuichi Kitagawa, Yasuchika Hasegawa
Hokkaido Univ., Sapporo, Japan
- P-10** Ion-pairing assemblies of charged porphyrins with reduced steric hindrance
Yuya Hashimoto, Hiroki Tanaka, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P-11** $E \rightleftharpoons Z$ -isomerization dynamics of photochromic hemiindigo derivatives
Yamato Higashi, Yu Kihara, Kazuki Hinago, Yutaka Nagasawa
Ritsumeikan Univ., Kusatsu, Japan
- P-12** Electron transfer mechanism in the green sulfur bacterial reaction center, studied by femtosecond transient absorption spectroscopy
Kazuki Hinago, Tomomi Inagaki, Tetsuya Yamamoto, Masataka Hoashi, Keita Sugihara, Chihiro Azai, Yutaka Nagasawa
Ritsumeikan Univ., Kusatsu, Japan
- P-13** Porphyrin zwitterions: Electronic properties and arrangement
Naoya Hiraishi, Yohei Haketa, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P-14** A BchF enzyme catalytically dehydrates a 1-hydroxyethyl group at the C3-position in zinc bacteriochlorophyll-*d* derivatives
Mitsuaki Hirose, Yusuke Tsukatani, Jiro Harada, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan; JAMSTEC, Yokosuka, Japan; Kurume Univ. Sch. Med., Kurume, Japan

- P-15** Near-infrared emission and singlet oxygen generation of an Yb(III) tetranuclear complex with porphyrin photosensitizer
Shota Hosoya, Sunao Shoji, Koji Fishimi, Yuichi Kitagawa, Yasuchika Hasegawa
Hokkaido Univ., Sapporo, Japan
- P-16** Synthesis of antiaromatic π -electronic systems that form assemblies
Soh Ishikawa, Shinya Sugiura, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P-17** Fabrication and photoelectric conversion properties of electropolymerized porphyrin-doped polythiophene films
Kengo Kanbe, Tsuyoshi Akiyama, Takeo Oku
Univ. Shiga Prefecture, Hikone, Japan
- P-18** Treatment of chromatophores of the purple photosynthetic bacterium *Rhodobacter sphaeroides* by an oxidant DDQ
Daiki Kaneko, Yoshitaka Saga
Kindai Univ., Higashi-Osaka, Japan
- P-19** Photochromic reaction of rhodamine spirolactam
Genki Kawai, Yoichi Kobayashi
Ritsumeikan Univ., Kusatsu, Japan
- P-20** Spectroscopic analysis of LH2 protein lacking B800 bacteriochlorophyll *a*
Shota Kawato, Yoshitaka Saga
Kindai Univ., Higashi-Osaka, Japan
- P-21** Synthesis and ion-pairing assemblies of anion-responsive π -electronic molecules with nonplanar structures
Rio Kugizaki, Yohei Haketa, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P-22** Synthesis and physical properties of polymers appending a chlorophyll derivative
Hiroaki Marumoto, Shin Ogasawara, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan

- P-23** Ion-pairing assemblies based on amphiphilic porphyrin Au^{III} complexes
Yuto Maruyama, Hiroki Tanaka, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P-24** Synthesis of π -extended pyrrole-bridged quinones
Mirai Mori, Shinya Sugiura, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P-25** Ion-pairing assemblies of π -extended dipyrrolyldiketone Pt^{II} complexes as anion-responsive molecules
Yu Murakami, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P-26** Oxygen sensing properties of seven-coordinated lanthanide complex with biphenyl frameworks
Takuma Nakai, Sunao Shoji, Koji Fushimi, Yasuchika Hasegawa and Yuichi Kitagawa
Hokkaido Univ., Sapporo, Japan
- P-27** Synthesis and physical properties of chlorophylls bearing fluorinated substitutes at the 3-position
Suzuka Nishibori, Shin Ogasawara, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P-28** Effects of silicon phthalocyanine layer on perovskite solar cells
Chihiro Ogawa, Iori Ono, Atsushi Suzuki, Takeo Oku, Masanobu Okita, Sakiko Fukunishi, Tomoharu Tachikawa, Tomoya Hasegawa
Univ. Shiga Pref., Hikone, Japan; Osaka Gas Chem., Osaka, Japan
- P-29** Topology control of anion-responsive π -electronic systems
Hiroki Okano, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P-30** Supramolecular polymerization of rosettes with expanded π -conjugated arms: Helical folding through rosette displacement
Chie Otsuka, Shiki Yagai
Chiba Univ., Chiba, Japan

- P-31** Development of electrodeposited silver nanostructures towards practical high-sensitive Raman scattering of organic compounds
Toya Otsuki, Tsuyoshi Akiyama, Takeo Oku
Univ. Shiga Pref., Hikone, Japan
- P-32** 3¹-Arylation of a chlorophyll-*a* derivative via Friedel-Crafts alkylation
Kana Sakaguchi, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P-33** Ultrafast bond-cleavage process of bis(phenoxyl-imidazolyl radical complex) derivatives
Tomoya Seri, Katsuya Mutoh, Jiro Abe, Yoichi Kobayashi
Ritsumeikan Univ., Kusatsu, Japan; Aoyama Gakuin Univ., Sagamihara, Japan
- P-34** Synthesis of pyrrole-bridged quinoidal molecules that exhibit diradical property
Shinya Sugiura, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P-35** Fabrication and characterization of CH₃NH₃PbI₃ perovskite solar cells using CuPcX₄ doped with TCNQ
Atsushi Suzuki, Ryota Hasegawa, Kai Funayama, Takeo Oku, Masanobu Okita, Sakiko Fukunishi, Tomoharu Tachikawa, Tomoya Hasegawa
Univ. Shiga Pref., Hikone, Japan; Osaka Gas Chem., Osaka, Japan
- P-36** Photo-control of hydrogen-bonded supramolecular polymorphism
Kenta Tamaki, Shiki Yagai
Chiba Univ., Chiba, Japan
- P-37** Electronic properties by ion pairing of activated charged porphyrins
Hiroki Tanaka, Yoichi Kobayashi, Ko Furukawa, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P-38** Ultrafast radiation free deactivation dynamics of nonfluorescent dye phenol blue in polymers
Taketomo Tanaka, Kazuki Hinago, Haruka Tsujii, Tetsuya Yamamoto, Yutaka Nagasawa
Ritsumeikan Univ., Kusatsu, Japan

- P-39** Spiral supramolecular polymers exhibiting inversion of supramolecular chirality
Mei Tohibori, Sougata Datta, Shiki Yagai
Chiba Univ., Chiba, Japan
- P-40** Self-aggregation of B-ring boronated chlorophyll-*a* derivatives
Ayaka Toda, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P-41** MLCT emission of Ce(III) coordination polymer induced by low HOMO energy of ligand
Toranosuke Tomikawa, Sunao Shoji, Tomoko Akama, Masato Kobayashi, Koji Fushimi, Tetsuya Taketsugu, Yasuchika Hasegawa, Yuichi Kitagawa
Hokkaido Univ., Sapporo, Japan
- P-42** Synthesis and photoelectric conversion application of C₆₀-ethylenediamine adducts
Haruka Ueno, Tsuyoshi Akiyama, Takeo Oku
Univ. Shiga Pref., Hikone, Japan
- P-43** Excited-state dynamics of indium-doped zinc oxide nanocrystals
Mai Yamaguchi, Yoichi Kobayashi
Ritsumeikan Univ., Kusatsu, Japan
- P-44** Energy transfer in cysteine-incorporated biohybrid light-harvesting antenna (LH2)
Tetsuya Yamamoto, Kazuki Hinago, Yutaka Nagasawa, Masaya Kito, Masaharu Kondo, Takehisa Dewa
Ritsumeikan Univ., Kusatsu, Japan; Nagoya Inst. Tech., Nagoya, Japan
- P-45** Squarylium cations: Positively charged π -electronic systems as building units of charge-segregated ion-pairing assemblies
Kazuhisa Yamasumi, Kentaro Ueda, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P-46** Self-aggregation of synthetic zinc chlorophylls possessing an achiral porphyrin core and a chiral periphery
Mizuki Yasui, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan

- P-47** Ion-pairing assemblies of π -electronic anions stabilized by intramolecular interactions
Miyu Yokoyama, Hiromitsu Maeda
Ritsumeikan Univ., Kusatsu, Japan
- P-48** Aggregation behavior of zinc chlorophyll derivatives possessing various substituents at the 7-position
Koki Yoshioka, Takafumi Yuasa, Hitoshi Tamiaki, Tomohiro Miyatake
Ryukoku Univ., Otsu, Japan; Ritsumeikan Univ., Kusatsu, Japan
- P-49** Synthesis of zinc diethylaminomethyl-oxochlorin regioisomers and their supramolecular complexation with histidines
Mio Yuasa, Hitoshi Tamiaki
Ritsumeikan Univ., Kusatsu, Japan
- P-50** Analysis of solvent effects on absorption spectra for chlorin-based dyad sensitizers by TD-DFT calculations
Takashi Nakamura, Shin-ichi Sasaki, Xiao-Feng Wang, Osamu Kitao
Nagahama Inst. Bio-Sci. Tech., Nagahama, Japan; Jilin Univ., Jilin, China; AIST, Tsukuba, Japan