

Poster Presentation Program as of Feb. 22, 2017

Friday, Mar. 3 from 18:00 to 19:00 (for presenters given an odd number)

Friday, Mar. 3 from 19:00 to 20:00 (for presenters given an even number)

P1 Light-harvesting antenna

- P1-01 New aspects in dipyrin-metal complexes
Ryota SAKAMOTO (*Univ. of Tokyo, JST-PRESTO*)
- P1-02 Reconstitution of the light-harvesting 1 complex from a purple photosynthetic bacterium *rhodospirillum rubrum* G9+ with fucoxanthin
Nao YUKIHIRA, Yuko SUGAI, Masazumi FUJIWARA, Daisuke KOSUMI, Masahiko IHA, Kazuhiko SAKAGUCHI, Sigeo KATSUMURA, Alastair T. GARDINER, Richard J. COGDELL, Hideki HASHIMOTO (*Kwansei Gakuin Univ., Kumamoto Univ., South Product Co. Ltd., Osaka City Univ., Univ. of Glasgow*)
- P1-03 Photoprotection mechanism in the LH1 antenna complex from a purple photosynthetic bacterium *rhodospirillum rubrum*
Hiroki SATO, Nao YUKIHIRA, Masazumi FUJIWARA, Yuko SUGAI, Alastair T. GARDINER, Richard J. COGDELL, Hideki HASHIMOTO (*Univ. of Glasgow, Kwansei Gakuin Univ.*)
- P1-04 Reconstitution of chlorophyll derivatives into the binding sites of B800 bacteriochlorophyll *a* in the light-harvesting complex 2 of purple photosynthetic bacteria
Kenta AMARI, Kanji MIYAGI, Yoshitaka SAGA (*Kindai Univ., JST-PRESTO*)
- P1-05 Cavity-mediated long-range energy transfer through fluorescent dye-doped polymer microspheres
Yohei YAMAMOTO, Daichi OKADA, Takashi NAKAMURA, Tatsuya NABESHIMA (*Univ. of Tsukuba*)
- P1-06 Binding of gold ions to the light-harvesting complex 2 of the purple photosynthetic bacterium *rhodoblastus acidophilus*: effects of B800 bacteriochlorophyll *a*
Kanji MIYAGI, Ryota MATSUI, Yoshitaka SAGA (*Kindai Univ., JST-PRESTO*)
- P1-07 Synthesis of a novel chlorosomal chlorophyll-*c* derivative and its self-aggregation
Shogo MATSUBARA, Hitoshi TAMIYAKI (*Ritsumeikan Univ.*)
- P1-08 Visible-light-responsive plasmonic photocatalysts
Ewa KOWALSKA, Zhishun WEI, Marcin Janczarek, Maya ENDO, Shuaizhi ZHENG, Hynd REMITA, Saulius JUODKAZIS, Agata MARKOWSKA-SZCZUPAK, Bunsho OHTANI (*Hokkaido Univ., Gdansk Univ. of Technology, Ulm Univ., Paris-sud Univ., Swinburne Univ. of Technology, West Pomeranian Univ. of Technology*)
- P1-09 New cyclometalated iridium complexes prepared by the post-synthetic modification
Yusuke KATAOKA, Kaede OKUNO, Natsumi YANO, Tatsuya KAWAMOTO, Makoto HANDA (*Shimane Univ., Kanagawa Univ.*)

- P1-10 Adsorption and characterization of major light-harvesting complexes chlorosomes of the green sulfur photosynthetic bacteria on graphene oxides
Yoshitaka SAGA, Takumi KOBAYASHI, Takashi KURUSHIMA (*Kindai Univ., JST-PRESTO*)
- P1-11 Self-assemblies of synthetic zinc chlorophyll derivatives possessing amide, ester and urea groups at the 17-substituents
Sunao SHOJI, Hitoshi TAMIAMI (*Ritsumeikan Univ.*)
- P1-12 Isolation and characterization of bacteriochlorophyll-*e* pigment possessing a vinyl group at C8 position
Yusuke KINOSHITA, Tadashi MIZOGUCHI, Shin OGASAWARA, Jiro HARADA, Chisa OKADA, Hitoshi TAMIAMI (*Ritsumeikan Univ., Kurume Univ.*)
- P1-13 Temperature effects on self-aggregation of synthetic zinc 3¹-hydroxy-chlorins
Yusuke YAMAMOTO, Tomohiro MIYATAKE, Hitoshi TAMIAMI (*Ryukoku Univ., Ritsumeikan Univ.*)
- P1-14 Monomer and dimer of photosystem II compared by excitation intensity dependence of ultrafast transient absorption
Yutaka NAGASAWA, Yusuke YONEDA, Tetsuro KATAYAMA, Hiroshi MIYASAKA, Yasufumi UMENA (*Ritsumeikan Univ., Osaka Univ., Okayama Univ., JST-PRESTO*)
- P1-15 Energy migration and antenna effect in mixed-ligand copper(I) halogenido coordination polymers
Kiyoshi TSUGE, Satoshi SUGIMOTO, Hideki OHTSU, Koichi NOZAKI (*Univ. Toyama*)
- P1-16 Noble metal-modified decahedral-shape anatase titania particles as visible light-active plasmonic photocatalyst
Marcin JANCZAREK, Zhishun WEI, Maya ENDO, Bunsho OHTANI, Ewa KOWALSKA (*Hokkaido Univ., Gdansk Univ. of Technology*)
- P1-17 Heterogeneous expression of light harvesting 1 (LH1) complex of the purple sulfur bacterium, *thermochromatium tepidum*, in the cells of the purple non-sulfur bacterium, *rhodobacter sphaeroides*
Kenji NAGASHIMA, Sakiko NAGASHIMA, Kazuhito INOUE, Zheng-Yu WANG-OTOMO (*Kanagawa Univ., Tokyo Metropolitan Univ., Ibaraki Univ.*)
- P1-18 Plasmonic nanoantenna interfaces for enhancement of photoelectrochemical reactions
Hiroyasu NISHI, Tokuhisa KAWAWAKI, Ling WU, Koichiro SAITO, Tetsu TATSUMA (*Univ. of Tokyo*)
- P1-19 Triplet excited state dynamics of chlorophyll *a* as revealed by sub-ns pump-probe spectroscopy
Daisuke KOSUMI, Tomoya NISHIGUCHI, Yutaka AMAO, Richard COGDELL, Hideki HASHIMOTO (*Kumamoto Univ., Osaka City Univ., Univ. of Glasgow, Kwansai Gakuin Univ.*)
- P1-20 The pH-dependent optical property of chlorophyll *c* bound to the light-harvesting complex from a diatom, *chaetoseros calcitrans*
Nami YAMANO, Tadashi MIZOGUCHI, Ritsuko FUJII (*Osaka City Univ., Ritsumeikan Univ.*)
- P1-21 Complexation of cationic zinc chlorophyll derivative and anionic copolymer for marking models of natural chlorophyll-protein complexes
Tomoya ODA, Tomohiro MIYATAKE (*Ryukoku Univ.*)

- P1-22 Effects of the diphosphate moiety in the exogenous isoprenoid substrates on *in vivo* attachment to bacteriochlorophyllide *c* in the green sulfur photosynthetic bacterium *chlorobaculum tepidum*
Hayato YAMASHITA, Keisuke HAYASHI, Yoshitaka SAGA (*Kindai Univ., JST-PRESTO*)
- P1-23 Synthesis of pyridylated and carboxylated chlorophyll derivatives and their application for all-solid-state DSSC
Yuxiao CUI, Wenjie ZHAO, Xiaofeng WANG, Hitoshi TAMIAMI (*Ritsumeikan Univ., Jilin Univ.*)
- P1-24 The photosynthetic competences of chlorosomes containing bacteriochlorophyll *c*, *d*, *e*, or *f* in the green sulfur bacterium *Chlorobaculum limnaeum* mutants cells
Jiro HARADA, Yutaka SHIBATA, Tadashi MIZOGUCHI, Misaki RYONO, Misato TERAMURA, Ken YAMAMOTO, Hitoshi TAMIAMI (*Kurume Univ., Tohoku Univ., Ritsumeikan Univ.*)
- P1-25 Synthesis and photophysical properties of novel methylene blue derivatives
Aratani NAOKI, Tamoto AKIRA, Yamada HIROKO (*NAIST*)

P2 Hydrogen Production

- P2-01 Synthesis of Ag-based plasmonic catalyst supported on single-site Ti-oxide modified mesoporous silica for the efficient hydrogen production from ammonia borane
Priyanka VERMA, Yasutaka KUWAHARA, Kohsuke MORI, Hiromi YAMASHITA (*Osaka Univ., Kyoto Univ., JST-PRESTO*)
- P2-02 Photocatalytic H₂ evolution activity of ZnS-AgInS₂ solid solution nanoparticles with different shapes and chemical compositions
Tsukasa TORIMOTO, Takahiro MACHIDA, Yutaro KAMIYA, Susumu KUWABATA, Tatsuya KAMEYAMA (*Nagoya Univ., Osaka Univ.*)
- P2-03 High performance 3C-SiC photocathode with surface pn-junction
Masashi KATO, Naoto ICHIKAWA, Masaya ICHIMURA (*Nagoya Institute of Technology*)
- P2-04 Coexposed {101}-{001} facets dependent photoelectrocatalytic reduction activity of TiO₂ nanocrystals in hydrogen production
Ning QIN, Yanan ZHANG, Yao YAO, Jianyun LI, Shennan HAN, Guohua ZHAO (*Tongji Univ.*)
- P2-05 Solar hydrogen evolution by water splitting (1): Development of photocatalyst using abundant natural resources
Yoshihiko SERA, Tomoko HORIBE, Kiyoshi ISOBE, Eiji YAMASHITA, Hideki HASHIMOTO (*Fuji Chemical Industries Co. Ltd., Kwansai Gakuin Univ.*)
- P2-06 Solar hydrogen evolution by water splitting (2): Evaluation of the hydrogen producing catalyst, Fe-GO
Tomoko HORIBE, Yoshihiko SERA, Kiyoshi ISOBE, Eiji YAMASHITA, Hideki HASHIMOTO (*Fuji Chemical Industries Co., Ltd, Kwansai Gakuin Univ.*)

- P2-07 Engineering the cubic CeO₂/g-C₃N₄ interfacial interaction to enhance photocatalytic H₂ production
Weixin ZOU, Yidan LUO, Lin DONG (*Nanjing Univ.*)
- P2-08 Photoelectrochemical hydrogen production by water splitting over dual-functionally modified oxide: *p*-type N-doped Ta₂O₅ photocathode active under visible light irradiation
Takeshi MORIKAWA, Tomiko SUZUKI, Shu SAEKI, Keita SEKIZAWA, Kosuke KITAZUMI, Naoko TAKAHASHI (*Toyota Central R&D Labs., Inc.*)
- P2-09 Photophysical properties and hydrogen-evolving reaction of platinum(II) complexes immobilized on the periodic mesoporous organosilica
Masaki YOSHIDA, Kento SAITO, Hiroki MATSUKAWA, Sae YANAGIDA, Atsushi KOBAYASHI, Yoshifumi MAEGAWA, Shinji INAGAKI, Masako KATO (*Hokkaido Univ., Toyota Central R&D Labs., Inc.*)
- P2-10 Anchor-shaped dirhodium complex as a catalyst for water reduction
Natsumi YANO, Yusuke KATAOKA, Tatsuya KAWAMOTO, Makoto HANDA (*Shimane Univ., Kanagawa Univ.*)
- P2-11 The enhanced photocatalytic hydrogen generation of fluorine ion modified graphitic carbon nitride nanosheets
Lei ZENG, Liming HUANG (*South Univ. of Science and Technology of China, Fudan Univ.*)
- P2-12 Peptide crosslinkers: Immobilization of platinum nanoparticles on graphene oxide nanosheets with enhanced photocatalytic properties
Tsukasa MIZUTARU, Dachao HONG, Hiroaki KOTANI, Takahiko KOJIMA, Takahiro KONDO, Jyunji NAKAMURA, Yohei YAMAMOTO, Sebastian KOHWALCOWSKI, Galina MARZUN, Stephan BARCIKOWSKI (*Univ. of Tsukuba, Univ. of Duisburg-Essen*)
- P2-13 Photocatalytic activity of rhodium doped titanate nanosheet for hydrogen evolution
Wasusate SOONTORNCHAIYAKUL, Takuya FUJIMURA, Yusuke KATAOKA, Ryo SASAI (*Shimane Univ.*)
- P2-14 Nonmetal-doped g-C₃N₄ nanosheets with highly efficient photocatalytic H₂ evolution from water under visible light
Yidan LUO, Weixin ZOU, Fei GAO, Lin DONG (*Nanjing Univ.*)
- P2-15 Photoelectrochemical hydrogen evolution from water using modified chalcopyrite thin films
Shigeru IKEDA, Takato KAWAGICHI, Shotaro FUJIKAWA, Takashi HARADA, Shuji NAKANISHI (*Konan Univ., Osaka Univ.*)
- P2-16 Fabrication of copper-based kesterite thin films using a facile spray deposition technique
Takato KAWAGUCHI, Shotaro FUJIKAWA, Thi Hiep NGUYEN, Takashi HARADA, Shoji NAKANISHI, Shigeru IKEDA (*Konan Univ., Osaka Univ.*)
- P2-17 Engineering cyanobacteria for biohydrogen production
Matthias ROEGNER, Katrin WIEGAND, Daniela KANNCHEN, Sascha REXROTH, Martin WINKLER, Thomas HAPPE, Sigrun RUMPEL, Wolfgang LUBITZ, Toshiharu HASE (*Ruhr-Univ., MPI Mülheim for Chemical Energy Conversion, Osaka Univ.*)

- P2-18 Construction of inorganic-organic hybrid systems for efficient photo-hydrogen evolution
Kana SAWAGUCHI, Atsushi KOBAYASHI, Masaki YOSHIDA, Masako KATO (*Hokkaido Univ.*)
- P2-19 Construction of photo-active framework with open-metal sites for H₂ production
Pondchanok CHINAPANG, Masaya OKAMURA, Takahiro ITOH, Mio KONDO, Shigeyuki MASAOKA (*IMS, SOKENDAI, Nagoya Univ., JST ACT-C*)
- P2-20 Sacrificial hydrogen production with high selectivity under aerobic conditions using Pt/TiO₂ photocatalysts
Hiroaki SAKURAI, Masato KIUCHI, Tetsuro JIN (*AIST*)
- P2-21 Photosensitization of the light-harvesting complex of photosystem II (LHCII) immobilized in nanoporous glass plates
Masaharu KONDO, Haruka MATSUDA, Mikihiro TADA, Tomoyasu NOJI, Tesuro JIN, Mamoru NANGO, Takehisa DEWA (*Nagoya Institute of Technology, Osaka City Univ., AIST*)
- P2-22 Photoelectrochemical visible light zero bias hydrogen generation with membrane-based cells designed for decreasing overall water electrolysis voltage and water dissociation (13)
Kenji SAKAMAKI, Sayuri USUI, Honoka MATSUDA, Wakana SAKASHITA, Ryoko KATO, Haruka ENDO, Masataka SATO (*Fukushima College, NIT*)
- P2-23 Photo anode and photo cathode properties based on iron oxide semiconductors
Hitoshi TABATA, Munetoshi SEKI, Hiroyasu YAMAHARA, Hakuto ZHANG (*Univ. of Tokyo*)
- P2-24 N-terminal nucleotide sequence dependency of anaerobic protein overexpression in the photosynthetic green sulfur bacterium *chlorobaculum tepidum*
Yusuke IKEDA, Yusei HAZAMA, Risa MUTOH, Asumi NORIMITSU, Hirozo OH-OKA, Genji KURISU, Kazuki TERAUCHI, Chihiro AZAI (*Ritsumeikan Univ., Osaka Univ., Fukuoka Univ.*)
- P2-25 Development of photocatalysts using two-dimensional semiconducting oxide nanosheets
Shintaro IDA, Hidehisa HAGIWARA, Tatsumi ISHIHARA (*Kyushu Univ.*)
- P2-26 Hydrogen photoproduction using chlorophyll derivatives bearing a methyl viologen moiety
Shota HIZUME, Shusaku IKEYAMA, Yutaka AMAO, Hitoshi TAMIYAKI (*Ritsumeikan Univ., Osaka City Univ.*)
- P2-27 Molecular Photocathodes for Solar Hydrogen Production
Christopher WINDLE, Romain BRISSE, Nicolas KAEFFER, Bruno JOUSSELME, Murielle CHAVAROT-KERLIDOU, Vincent ARTERO (*CEA, Grenoble*)
- P2-28 Significantly improved solar-to-H₂ energy conversion with a simultaneous SO₂ removal
Liwu ZHANG, Jin HAN, Kejian LI (*Fudan Univ.*)

P3 Oxygen Evolution

- P3-01 The mechanism of water oxidation catalyzed by a dinuclear ruthenium complex bridged by bis(terpyridyl)anthraquinone
Tohru WADA, Shunsuke NISHIMURA, Yuji MIYAZATO (*Rikkyo Univ., Tokyo Denki Univ.*)

- P3-02 Highly active and durable electrocatalytic water oxidation by an in situ-formed NiB_{0.45}/NiO_x core-shell nanoparticulate film
Jian JIANG, Mei WANG, Wensheng YAN, Jinxuan LIU, Licheng SUN (*Dalian Univ. of Technology, Univ. of Science and Technology of China, KTH Royal Institute of Technology*)
- P3-03 Bond distances in the intact Mn₄CaO₅-cluster of oxygen-evolving photosystem II at 1.62 angstrom resolution
Keisuke KAWAKAMI, Naoto INOHARA, Nobuo KAMIYA (*Osaka City Univ.*)
- P3-04 Carbonate ion cofactor induces highly performed electrocatalytic water oxidation by cobalt oxyhydroxide nanoparticles
Ryouchi TAKEUCHI, Kenji SAITO, Tatsuto YUI, Masayuki YAGI (*Niigata Univ.*)
- P3-05 Improvement of photosystem II activity in solution and nanopores inside porous glass
Yusuke IKEDA, Tomoyasu NOJI, Keisuke KAWAKAMI, Tetsuro JIN, Nobuo KAIMIYA (*Osaka City Univ., AIST*)
- P3-06 Electrochemical water oxidation catalyzed by copper(II) complexes containing amine-pyridine ligands
Junyu SHEN, Mei WANG, Peili ZHANG, Jian JIANG, Licheng SUN (*Dalian Univ. of Technology, KTH Royal Institute of Technology*)
- P3-07 Ru and W mixed oxide active as water oxidation catalyst
Masahiro SADAKANE, Masaya KIKUCHI, Mayumi MIYAMOTO, Nao TSUNOJI, Tsuneji SANO (*Hiroshima Univ.*)
- P3-08 Synthesis of heterometallic complexes of manganese and alkali metals with a cage-type ligand: Structural models for oxygen evolving center
Tsubasa HATANAKA, Shuhei YONAGA, Kosuke TANGE, Yasuhiro FUNAHASHI (*Osaka Univ.*)
- P3-09 Water oxidation reaction catalyzed by pentanuclear iron complexes
Masaya OKAMURA, Reiko KUGA, Satoshi KAWATA, Mio KONDO, Shigeyuki MASAOKA (*IMS, Nagoya Univ., Fukuoka Univ., JSTACT-C*)
- P3-10 Operando observation of cobalt catalysts for oxygen evolution by soft X-ray XAFS
Masaaki YOSHIDA, Yosuke MITSUTOMI, Masanari NAGASAKA, Hayato YUZAWA, Nobuhiro KOSUGI, Hiroshi KONDOH (*Keio Univ., IMS*)
- P3-11 Electrochemical water oxidation reaction catalyzed by a novel tetranuclear copper complex
Praneeth VIJAYENDRAN, Mio KONDO, Pei Meng WOI, Masaya OKAMURA, Shigeyuki MASAOKA (*IMS, SOKENDAI, JSTACT-C, Univ. of Malaya, Nagoya Univ.*)
- P3-12 Syntheses and electrochemical properties of penta-nuclear metal clusters
Hitoshi IZU, Masaya OKAMURA, Mari KANAIKE, Praneeth VIJAYENDRAN, Satoshi KAWATA, Mio KONDO, Shigeyuki MASAOKA (*IMS, SOKENDAI, Nagoya Univ., Fukuoka Univ., JSTACT-C*)
- P3-13 High efficient oxygen evolution and solar energy accumulation into reactant solution over BiVO₄ photocatalyst employing iron redox mediator under visible light irradiation
Yugo MISEKI, Kazuhiro SAYAMA (*AIST*)

P3-14 OH radical formation on monoclinic BiVO₄ in the photo-electrochemical water oxidation process

Yukihiro NAKABAYASHI, Masami NISHIKAWA, Nobuo SAITO, Chiaki TERASHIMA, Akira FUJISHIMA (*Tokyo Univ. of Science, Nagaoka Univ. of Technology*)

P3-15 O-O bond formation pathway of water oxidation on hematite

Wenjing SONG, Yuchao ZHANG, Chuncheng CHEN, Jincai ZHAO (*Chinese Academy of Sciences*)

P4 Water Splitting

P4-01 Features of particulate photocatalyst sheets for Z-scheme water splitting compared to powder suspension and photoelectrochemical systems

Qian WANG, Takashi HISATOMI, Akihiko KUDO, Taro YAMADA, Kazunari DOMEN (*Univ. of Tokyo, ARPCHEM, Tokyo Univ. of Science*)

P4-02 Toward the creation of high activity water-splitting photocatalysts by using gold clusters co-catalysts

Yuichi NEGISHI, Wataru KURASHIGE, Tomoaki TAKAYAMA, Akihiko IWASE, Akihiko KUDO (*Tokyo Univ. of Science*)

P4-03 Visible light-driven Z-scheme water splitting using oxysulfide as a H₂ evolution photocatalyst

Guijun MA, Shanshan CHEN, Yongbo KUANG, Takashi HISATOMI, Masao KATAYAMA, Tsutomu MINEGISHI, Kazunari DOMEN (*Univ. of Tokyo, ARPCHEM*)

P4-04 Spatial separation of photogenerated electrons and holes between different facets of semiconductor-based crystals

Rengui LI, Linchao MU, Xiaoping TAO, Yue ZHAO, Can LI (*Chinese Academy of Sciences*)

P4-05 Observation of adsorbed surfactant molecules and organic molecules on hydrogen terminated Si(111) surface by in-situ ATR-FTIR

Toshihito OHTAKE, Ken-ichiro IJIMA (*Prefectural Univ. of Hiroshima, Aichi Univ. of Technology*)

P4-06 Control of photocatalytic properties of oxynitrides by element substitution

Hideki KATO, Makoto KOBAYASHI, Masato KAKIHANA (*Tohoku Univ.*)

P4-07 Electrochemical approach towards artificial photosynthesis utilizing ubiquitous silicon

Sebastian Nybin REMELLO, Fazalurahman KUTTASSERY, Takehiro HIRANO, Daisuke YAMAMOTO, Satomi ONUKI, Yu NABETANI, Hiroshi TACHIBANA, Haruo INOUE (*Tokyo Metropolitan Univ.*)

P4-08 Excited state dynamics of aluminum(III) porphyrins in solution by femtosecond transient absorption spectroscopy

Yu NABETANI, Fazalurahman KUTTASSERY, Siby MATHEW, Daisuke YAMAMOTO, Hiroshi TACHIBANA, Haruo INOUE (*Univ. of Miyazaki, Tokyo Metropolitan Univ.*)

P4-09 Efficient photooxidation of water using TiO₂ electrode co-adsorbed with ge-porphyrin and organic dye under visible-light irradiation

Tsutomu SHIRAGAMI, Nami OKUMURA, Yu NABETANI (*Univ. of Miyazaki*)

- P4-10 Effect of proton concentration upon two-electron oxidation of water to hydrogen peroxide using Ge-porphyrin-sensitized photovoltaic cell
Jyunpei UCHIDA, Tsutomu SHIRAGAMI (*Univ. of Miyazaki*)
- P4-11 Hydrogen peroxide generation induced by one-electron oxidation of earth-abundant aluminum porphyrins
Fazalurahman KUTTASSERY, Siby MATHEW, Daisuke YAMAMOTO, Satomi ONUKI, Yu NABETANI, Hiroshi TACHIBANA, Haruo INOUE (*Tokyo Metropolitan Univ.*)
- P4-12 Wireless device for efficient artificial photosynthesis based on III-V triple-junction solar cell
Shinya OKAMOTO, Satoshi YOTSUHASHI (*Panasonic Corporation*)
- P4-13 Tin(IV) porphyrins as molecular catalysts for water oxidation
Arun THOMAS, Fazalurahman KUTTASSERY, Sebastian Nybin REMELLO, Siby MATHEW, Daisuke YAMAMOTO, Yu NABETANI, Satomi ONUKI, Hiroshi TACHIBANA, Haruo INOUE (*Tokyo Metropolitan Univ.*)
- P4-14 Photochemical deposition of multi-component cocatalyst for water splitting
Tomoki KANAZAWA, Kazuhiko MAEDA (*Tokyo Institute of Technology*)
- P4-15 Photocatalytic H₂ and O₂ evolution reactions driven by Ru(II)-complex-immobilized TiO₂ nanoparticles
Atsushi KOBAYASHI, Sogo FURUGORI, Masaki YOSHIDA, Masako KATO (*Hokkaido Univ.*)
- P4-16 Impedance analysis of water oxidation reaction with GaN photoanode
Yuya UZUMAKI, Yoko ONO, Kazuhide KUMAKURA, Takeshi KOMATSU (*NTT Corporation*)
- P4-17 Photoelectrochemical properties of AlGaIn/n-GaN photoanode with NiO layer
Yoko ONO, Yuya UZUMAKI, Kazuhide KUMAKURA, Takeshi KOMATSU (*NTT Corporation*)
- P4-18 Z-scheme water splitting into H₂ and O₂ under visible-light over photocatalyst panels consisting of Rh-doped SrTiO₃ and BiVO₄ fine particles
Sayuri OKUNAKA, Hiromasa TOKUDOME, Ryu ABE (*TOTO LTD., Kyoto Univ.*)
- P4-19 A supramolecular aluminum porphyrin with high stability for water oxidation
Siby MATHEW, Fazalurahman KUTTASSERY, Daisuke YAMAMOTO, Satomi ONUKI, Yu NABETANI, Hiroshi TACHIBANA, Haruo INOUE (*Tokyo Metropolitan Univ., Univ. of Miyazaki*)
- P4-20 Z-scheme water splitting using tungstic acid as an oxygen-evolving photocatalyst under visible light irradiation
Hajime SUZUKI, Masanobu HIGASHI, Ryu ABE (*Kyoto Univ.*)
- P4-21 Anodic photocurrent properties of oxide-based photocatalyst film using nanoparticle deposition
Toshio MANABE, Hideyuki AMADA, Toshihisa ANAZAWA, Fumiaki KUMASAKA, Naoki AWAJI, Yoshihiko IMANAKA (*Fujitsu Laboratories Ltd.*)
- P4-22 Characterization of aln: Tm absorbing UV-vis-IR light
Nobuyuki TATEMIZO, Saki IMADA, Koji NISHIO, Toshiyuki ISSHIKI, Yoshio MIURA (*Kyoto Institute of Technology*)

- P4-23 Photocatalytic and photoelectrochemical properties of metal ions-doped bismuth vanadate fine particles
Akihide IWASE, Akihiko KUDO (*Tokyo Univ. of Science*)
- P4-24 Z-schematic water splitting and CO₂ reduction under visible light irradiation using metal sulfide solid solutions and RGO-(CoO_x/BiVO₄) photocatalysts
Shunya YOSHINO, Akihide IWASE, Tomoaki TAKAYAMA, Akihiko KUDO (*Tokyo Univ. of Science*)
- P4-25 Improved photocatalytic water oxidation with Fe³⁺/Fe²⁺ redox on rectangular-shaped WO₃ particles with specifically exposed crystal faces *via* hydrothermal synthesis
Osamu TOMITA, Shinnosuke NITTA, Yuya MATSUTA, Saburo HOSOKAWA, Masanobu HIGASHI, Ryu ABE (*Kyoto Univ.*)
- P4-26 Energetics of proton release in the water oxidizing enzyme
Keisuke SAITO, Hiroshi ISHIKITA (*Univ. of Tokyo*)
- P4-27 Selective production of peroxides over BiVO₄/WO₃ photoelectrode
Yuta MIYASE, Kojiro FUKU, Yugo MISEKI, Takahiro GUNJI, Kazuhiro SAYAMA (*Tokyo Univ. of Science, AIST*)
- P4-28 Surface-modified metal sulfides as stable H₂ evolving photocatalyst in Z-scheme water splitting system with [Fe(CN)₆]^{3-/4-} redox mediator under visible light irradiation
Masanobu HIGASHI, Takashi SHIRAKAWA, Osamu TOMITA, Ryu ABE (*Kyoto Univ.*)
- P4-29 Elucidation of size dependence of Au cluster co-catalyst on water-splitting photocatalytic activity
Wataru KURASHIGE, Takumi TERUI, Daiki ISHII, Shun YOSHINO, Rina KUMAZAWA, Rui HAYASHI, Shunsuke NOZAWA, Yuichi NEGISHI (*Tokyo Univ. of Science, High Energy Accelerator Research Organization*)

P5 CO₂ Reduction

- P5-01 Microfluidic reactors for artificial photosynthesis of glucose
Xuming ZHANG, Yujiao ZHU, Xiaowen HUANG (*The Hong Kong Polytechnic Univ.*)
- P5-02 CO₂ reduction with H₂O over Ga₂O₃ photocatalysts with various coordination structures
Tomoko YOSHIDA, Masato AKATSUKA, Muneaki YAMAMOTO, Yu KAWAGICHI, Akiyo OZAWA, Satoshi OGAWA, Shinya YAGI (*Osaka city Univ., Nagoya Univ.*)
- P5-03 Synthesis and photocatalytic ability of novel photofunctional multinuclear complexes using C-C coupling reactions and a photochemical hydrogenation reaction
Yasuomi YAMAZAKI, Akinari UMEMOTO, Osamu ISHITANI (*Tokyo Institute of Technology*)
- P5-04 Fabrication of Sr₂KTa₅O₁₅ nanorods by a flux method for artificial photosynthesis
Zeai HUANG, Kentaro TERAMURA, Hiroyuki ASAKURA, Saburo HOSOKAWA, Tsunehiro TANAKA (*Kyoto Univ.*)

- P5-05 Enhancement of photocurrent and selectivity for photoelectrochemical CO₂ reduction by using Cu₂ZnSnS₄ photocathodes modified with various n-type layers
Yosuke SASAKI, Sunao KAMIMURA, Teruhisa OHNO (*Kyushu Institute of Technology, JST-PRESTO, JSTACT-C*)
- P5-06 Enhancement of selectivity toward CO evolution by durable cocatalysts modification for the photocatalytic conversion of CO₂
Rui PANG, Kentaro TERAMURA, Hiroyuki ASAKURA, Saburo HOSOKAWA, Tsunehiro TANAKA (*Kyoto Univ.*)
- P5-07 Zn-based metal sulfides linked with Ru-complexes for photocatalytic CO₂ reduction under visible light irradiation
Tomiko SUZUKI, Akihide IWASE, Shunsuke SATO, Tomoaki TAKAYAMA, Akihiko KUDO, Takeshi MORIKAWA (*Toyota Central R&D Labs., Inc., Tokyo Univ. of Science*)
- P5-08 Photochemical reduction of CO₂ with porous coordination polymers-ruthenium complex hybrid catalysts
Takashi KAJIWARA, Miyuki IKEDA, Shuhei MINE, Susumu KITAGAWA (*Kyoto Univ.*)
- P5-09 Development of metal complex catalysts for CO₂ reduction
Shunsuke SATO, Takeshi MORIKAWA (*Toyota Central R&D Labs., Inc.*)
- P5-10 Direct gas-phase CO₂ reduction for solar methane generation using a gas diffusion electrode
Qingxin JIA, Shinichi TANABE, Ichitaro WAKI (*Showa Shell Sekiyu K.K.*)
- P5-11 The electrochemical reduction of CO₂ catalyzed by carbon-supported crystal copper(II) phthalocyanine and its derivatives
Shoko KUSAMA, Akihiro SAKAI, Hiroshi HASHIBA, Shinya OKAMOTO, Hiroki SATO, Kosuke NAKAJIMA (*Panasonic Corporation*)
- P5-12 Fabrication of visible light induced CO₂ reduction system on *p*-type semiconductor to be coupled with water oxidation system
Daisuke YAMAMOTO, Youki KOU, Yu NABETANI, Hiroshi TACHIBANA, Haruo INOUE (*Tokyo Metropolitan Univ.*)
- P5-13 Organic-inorganic hybrid photocatalyst for carbon dioxide reduction
Dong-Il WON, Jong-Su LEE, Ha-Yeon CHEONG, Minji CHO, Seong-Han CHOI, Ho-Jin SON, Chyongjin PAC, Sang Ook KANG (*Korea Univ.*)
- P5-14 Photoelectrochemical water splitting and CO₂ reduction using metal sulfide photocathodes modified with organic conductive polymers
Tomoaki TAKAYAMA, Akihide IWASE, Akihiko KUDO (*Tokyo Univ. of Science*)
- P5-15 Highly selective photocatalytic reduction of carbon dioxide in water over silver-modified calcium titanate
Akihiko ANZAI, Naoto FUKUO, Akira YAMAMOTO, Hisao YOSHIDA (*Kyoto Univ.*)
- P5-16 CO₂ adsorption and reduction properties influenced by several characteristic Ag species on Ga₂O₃ photocatalysts
Muneaki YAMAMOTO, Shinya YAGI, Tomoko YOSHIDA (*Nagoya Univ., Osaka City Univ.*)

- P5-17 Highly robust hybrid photocatalyst for carbon dioxide reduction: Tuning and optimization of catalytic activities of Dye/TiO₂/Re(I) organic-inorganic ternary systems
Dong-Il WON, Jong-Su LEE, Ha-Yeon CHEONG, Minji CHO, Sung-Jun WOO, Ho-Jin SON, Chyongjin PAC, Sang Ook KANG (*Korea Univ*)
- P5-18 Effect of viologen derivative with carbamoylmethyl group as an electron carrier on the visible-light induced formic acid production from CO₂ with zinc porphyrin and formate dehydrogenase
Shusaku IKEYAMA, Takayuki KATAGIRI, Yutaka AMAO (*Osaka City Univ*)
- P5-19 CO₂ photoreduction performance of Au/TiO₂ catalyst with simultaneous mid-infrared laser irradiation
Tsubasa KONDOH, Yasuko MARUO, Atsushi SATO (*Tohoku Institute of Technology*)
- P5-20 Syntheses and CO₂ reduction activities of π -expanded/extended iron porphyrin complexes
Mio KONDO, Yuki OKABE, Shigeyuki MASAOKA (*JMS*)
- P5-21 Photocatalytic CO₂ reduction by 3d-metal complexes bearing an S₂N₂-type tetradentate ligand
Takahiko KOJIMA, Dachao HONG, Yuto TSUKAKOSHI, Hiroaki KOTANI, Tomoya ISHIZUKA (*Univ. Tsukuba, AIST*)
- P5-22 Visible-light-driven CO₂ reduction coupled to water oxidation using photocathode with molecular photocatalyst and semiconductor photoanode
Hiromu KUMAGAI, Go SAHARA, Kazuhiko MAEDA, Nicolas KAEFFER, Vincent ARTERO, Masanobu HIGASHI, Ryu ABE, Osamu ISHITANI (*Tokyo Institute of Technology, Universite Grenoble Alpes, Kyoto Univ*)
- P5-23 Electrochemical CO₂ reduction using palladium-based bimetallic nanoparticle catalysts
Toshihiro TAKASHIMA, Tomohiro SUZUKI, Hiroshi IRIE (*Univ. of Yamanashi*)
- P5-24 Preparation of silver titanate photocatalysts and their photocatalytic activity for reduction of carbon dioxide
Soichiro AMANUMA, Akira YAMAMOTO, Hisao YOSHIDA (*Kyoto Univ*)
- P5-25 Widely controllable syngas (H₂ + CO) production by a dye-sensitized TiO₂ hybrid system with Re(I) and Co(III) dual molecular catalysts under visible-light irradiation
Jong-Su LEE, Dong-Il WON, Bo-Sun YUN, Jong-Hoon KIM, Ho-Jin SON, Chyongjin PAC, Sang Ook KANG (*Korea Univ*)
- P5-26 Supramolecular photocatalysts for CO₂ reduction designed for the immobilization with heterogeneous materials
Yusuke TAMAKI, Osamu ISHITANI (*Tokyo Institute of Technology*)
- P5-27 Determination of a standard electrode potential of the CO₂ reduction to CO in acetonitrile
Yasuo MATSUBARA, David GRILLS, Yutaka KUWAHARA (*Kanagawa Univ., Brookhaven National Lab., Kumamoto Univ*)
- P5-28 Photoreduction reaction of CO₂ using ruthenium(II) complex having arylborane units
Eri SAKUDA, Nanami ISHIZAKI, Shinnosuke HORIUCHI, Yasuhiro ARIKAWA, Keisuke UMAKOSHI, Noboru KITAMURA (*Nagasaki Univ., Hokkaido Univ*)
- P5-29 Photocatalytic CO₂ reduction using rhenium(I) complexes with CO₂ capture ability
Tatsuki MORIMOTO, Tomomi KITAMURA (*Tokyo Univ. of Technology*)

- P5-30 A model complex of the intermediate in CO₂ reduction catalyzed by [Ru(bpy)₂(CO)₂]²⁺: XAFS measurements and reaction with O₂ in non-aqueous aprotic solvents
Hitoshi ISHIDA, Masaya KAMIYA, Yusuke KURAMOCHI, Tokushi SATO, Shunsuke NOZAWA, Shin-ichi ADACHI (*Kitasato Univ., Tokyo Univ. of Science, High Energy Accelerator Research Organization, Deutsches Elektronen-Synchrotron*)
- P5-31 Photocatalytic CO₂ reduction by bipyridyl periodic mesoporous organosilica (BPy-PMO) containing two different ruthenium complexes as photosensitizing and catalytic sites
Hitoshi ISHIDA, Masato SEKINE, Kyohei KITAMURA, Yusuke KURAMOCHI, Yoshifumi MAEGAWA, Yasutomo GOTO, Shinji INAGAKI (*Kitasato Univ., Toyota Central R&D Lab., Inc., Tokyo Univ. of Science*)
- P5-32 Temperature dependence of photocatalytic CO₂ reduction by *trans*(Cl)-Ru(bpy)(CO)₂Cl₂: Activation energy difference between CO and formate production
Hitoshi ISHIDA, Akihiko SAKABA (*Kitasato Univ.*)
- P5-33 Deuterium isotope effect on photocatalytic CO₂ reduction by *trans*(Cl)-Ru(bpy)(CO)₂Cl₂ in heavy water/*N,N*-dimethylacetamide
Kyohei KITAMURA, Yusuke KURAMOCHI, Hitoshi ISHIDA (*Kitasato Univ.*)
- P5-34 Photochemical CO₂ reduction by novel photocatalysts in which photosensitizing and catalytic sites link with a peptide
Chiaki KOJIMA, Jun ITABASHI, Hitoshi ISHIDA (*Kitasato Univ.*)
- P5-35 Photocatalytic CO₂ reduction by *trans*(Cl)-Ru(bpy)(CO)₂Cl₂-peptide conjugates
Atsushi OHTSUKA, Masaya KAMIYA, Yusuke KURAMOCHI, Hitoshi ISHIDA (*Kitasato Univ., Tokyo Univ. of Science*)
- P5-36 Hybrid Cu_xO-TiO₂ Heterostructured Composites for Photocatalytic CO₂ Reduction: Sunlight into Fuel
 Su-II IN (*Daegu Gyeongbuk Institute of Science & Technology*)

P6 Advanced Measurement and Spectroscopy

- P6-01 Ultrafast vibronic dynamics in zinc chlorin aggregate as a model of supramolecular antenna complexes
Juan DU, Dongjia HAN, Takayoshi KOBAYASHI, Tomohiro MIYATAKE, Hitoshi TAMIAKI, Yuxin LENG (*Chinese Academy of Sciences, Univ. of Chinese Academy of Sciences, Univ. of Electro-Communications, JST-CREST, Ryukoku Univ., Ritsumeikan Univ.*)
- P6-02 Solvent dependent *trans-cis* isomerization of *N,N'*-diacetylidigo studied by time-resolved transient absorption spectroscopy
Hirofumi NAKAGAWA, Akifumi MATSUMOTO, Ayako DAICHO, Yosuke OZAKI, Yutaka NAGASAWA (*Ritsumeikan Univ., JST-PRESTO*)

- P6-03 Isolation and purification of capsanthin from red paprika (*Capsicum Annuum L.*) and its application to the stark spectroscopic measurements
Shota SETO, Tomoko HORIBE, Chiasa URAGAMI, Yuko SUGAI, Takashi MAOKA, Takanori NISHIOKA, Hideki HASHIMOTO (*Kwansei Gakuin Univ., Fuji Chemical Co. Ltd., Osaka City Univ.*)
- P6-04 Visualization of transient molecular structures by high-repetition-rate time-resolved XAFS
Shunsuke NOZAWA, Ryo FUKAYA, Kouhei ICHIYANAGI, Shin-ichi ADACHI (*High Energy Accelerator Research Organization, SOKENDAI*)
- P6-05 Behavior of photogenerated electrons and holes at the defects on anatase and rutile TiO₂ powders studied by transient absorption spectroscopy from visible to mid-IR region
Akira YAMAKATA, Junie Jhon M. VEQUIZO, Hironori MATSUNAGA (*Toyota Technological Institute, JST-PRESTO*)
- P6-06 Relaxation dynamics of singlet oxygen by charge transfer quenching in room temperature ionic liquids
Mai KATO, Tsuyoshi YOSHIDA, Akio KAWAI (*Tokyo Institute of Technology*)
- P6-07 Ta⁻ or Ga-doped SrTiO₃ photocatalysts synthesized by molten-salt method
Yohan PARK, Hiroshi ONISHI (*Kobe Univ.*)
- P6-08 Analysis of photoreaction of metal complexes in solution by cyclic voltammetry
Arisa FUKATSU, Masaya OKAMURA, Yuki OKABE, Mio KONDO, Shigeyuki MASAOKA (*IMS, SOKENDAI, Nagoya Univ., JST ACT-C*)
- P6-09 Seeing the cocatalyst boosted vectorial charge transfer on a single photocatalyst particle
Fengtao FAN, Can LI (*Chinese Academy of Sciences*)

P7 Theoretical Rationalization, Design, and Prediction

- P7-01 DFT-based verification of perovskite solar cell as PbI₆-based molecular solar cell
Shozo YANAGIDA, Susumu YANAGISAWA, Masatoshi YANAGIDA, Hiroshi SEGAWA (*Osaka Univ., NIMS, Ryukyuu Univ., Univ. of Tokyo*)
- P7-02 Theoretical studies of carrier diffusion in perovskite tantalum oxynitride photocatalyst
Hiroki IRIGUCHI, Eriko WATANABE, Koichi YAMASHITA (*Univ. of Tokyo, JST-CREST*)
- P7-03 Photoexcitation mechanism of metallic Sr_{1-x}NbO₃ for watersplitting photocatalyst
Masanori KANEKO, Giacomo GIORGI, Koichi YAMASHITA (*Univ. of Tokyo, Università degli Studi di Perugia*)
- P7-04 First principle calculation of pristine nickel hydroxide and related materials
Yuki SAKAMOTO, Shinichiro NAKAMURA (*RIKEN, Tokyo Institute of Technology*)
- P7-05 Structural and electronic features of perovskite-type photocatalysts: Insights from first-principles
Ayako KUBO, Giacomo GIORGI, Koichi YAMASHITA (*Univ. of Tokyo, Università degli Studi di Perugia*)
- P7-06 Effect of co-catalyst on water-splitting photocatalyst: A DFT Analysis
Kaharu MIZUNO, Koichi YAMASHITA (*Univ. of Tokyo, JST-CREST*)

P7-07 Bandgap narrowing of GaN-ZnO solid-solution film by nanoparticle deposition
Toshihisa ANAZAWA, Toshio MANABE, Hideyuki AMADA, Fumiaki KUMASAKA, Naoki AWAJI, Yoshihiko IMANAKA (*Fujitsu Laboratories Ltd.*)

P8 Others

P8-01 Self-assembling J-aggregates of semi-synthetic bacteriochlorins as hole-transporting materials for perovskite solar cells

Shin-ichi SASAKI, Mengzhen LI, Tsutomu MIYASAKA, Hitoshi TAMIYAKI, Toshitaka IKEUCHI, Xiao-Feng WANG (*Nagahama Institute of Bio-Science and Technology, Ritsumeikan Univ., Jilin Univ., Toin Univ. of Yokohama*)

P8-02 Characterization of biohybrid device composed of genetically modified photosystem I and separated single-walled carbon nanotubes of semiconducting and metallic

Daisuke NII, Masahiro ITO, Yoshikazu HOMMA, Mariko MIYACHI, Yoshinori YAMANOI, Hiroshi NISHIHARA, Tatsuya TOMO (*Tokyo Univ. of Science, Univ. of Tokyo*)

P8-03 The construction of inorganic-organic complexes by semiconductor nanosheets

Keito SANO, Amane SONOTANI, Daichi TATSUMI, Tetsuya SHIMADA, Shinsuke TAKAGI (*Tokyo metropolitan Univ.*)

P8-04 Effect of tungsten oxide grafting on photocatalytic oxygenation of benzene on titanium oxide in a fixed bed flow reactor

Shuhei EGASHIRA, Shunsuke NOZAWA, Hisanao USAMI (*Shinshu Univ., High Energy Accelerator Research Organization*)

P8-05 Effect of oxygen gas bubbling on hydroxyl radical production and photocatalytic decomposition of 4-chlorophenol in porous glass reactor

Hisanao USAMI, Kai OKUMURA (*Shinshu Univ.*)

P8-06 P-N junction based organophotocatalyst

Keiji NAGAI, Fairus AHMAD, Toshiyuki ABE (*Tokyo Institute of Technology, Hirosaki Univ.*)