Poster Presentations

Odd Numbers: Tuesday, Nov. 25
Even Numbers: Wednesday Nov. 26

P1 Light-Harvesting Antenna

P1-01 Supramolecular assemblies of zinc chlorophylls toward light-harvesting antenna
Yoshinao SHINOZAKI, Joe OTSUKI (*Nihon Univ.*)

P1-02 Resonant photoemission from self-assembled π-conjugated polymer microspheres
Yohei YAMAMOTO (*Univ. of Tsukuba*)

P1-03 Effects of C3[1] stereochemistry of bacteriochlorophyll *c* on light harvesting antenna of *Chlorobaculum tepidum*
Misato TERAMURA, Jiro HARADA, Tadashi MIZOGUCHI, Yusuke TSUKATANI, Hitoshi TAMIAKI (*Ritsumeikan Univ., Kurume Univ., JST-PRESTO, Tokyo Institute of Technology*)

P1-04 Brightly luminescent asymmetric dipyrrin metal complexes
Ryota SAKAMOTO, Toshiki IWASHIMA, Mizuho TSUCHIYA, Shinpei KUSAKA, Hiroshi NISHIHARA (*The Univ. of Tokyo*)

P1-05 Development of large photofunctional multi-chromophoric systems
Naoki ARATANI, Akinobu MATSUMOTO, Akira TAMOTO, Kyohei SEZUKURI, Mitsuru KOJIMA, Daiki KUZUHARA, Mitsuharu SUZUKI, Hiroko YAMADA (*NAIST*)

P1-06 Energy migration in luminescnet mixed-metallic or mixed-ligand copper(I) and silver(I) coordination polymers
Kiyoshi TSUGE, Seiko SHIBATA, Masaaki DOSEN, Shoma YAMASHITA, Satoshi SUGIMOTO, Hideki OHTSU, Yoichi SASAKI, Noboru KITAMURA, Masako KATO (*Univ. of Toyama, Hokkaido Univ.*)

P1-07 Photochmical energy transfer in three-dimensional clay-porphyrin system
Hiromasa NISHINAKA, Takaaki EYAMA, Yuta OHTANI, Yohei ISHIDA, Tetsuya SHIMADA, Shunsuke TAKAGI (*Tokyo Metropolitan Univ., Hokkaido Univ.*)

P1-08 Biosynthesis of unnatural bacteriochlorophylls *c* possessing an unsaturated bond at the terminus of the esterifying chain in a green sulfur photosynthetic bacterium *Chlorobaculum tepidum*
Yoshitaka SAGA, Keisuke HAYASHI, Hitoshi TAMIAKI (*Kinki Univ., Ritsumeikan Univ.*)

P1-09 Synthesis and self-aggregation of chlorophyll derivatives possessing a ß-diketonate and pyrazole group at the C3 position
Yusuke KINOSHITA, Hitoshi TAMIAKI (*Ritsumeikan Univ.*)

P1-10 Energy transfer from pyrene derivative to $Ru(bpy)_3^{2+}$ on clay surface

Keita SATO, Kenji SAITO, Masayuki YAGI, Shinsuke TAKAGI, Tatsuto YUI (*Niigata Univ., Tokyo Metropolitan Univ.*)

P1-11 Characterization of chlorosomes variants containing bacteriochlorophyll *c*, *d*, *e*, or *f* in the mutants derived from the identical strain of brown-colored green sulfur bacterium
Jiro HARADA, Yutaka SHIBATA, Misaki RYONO, Ken YAMAMOTO, Tadashi MIZOGUCHI, Hitoshi TAMIAKI (*Kurume Univ., Tohoku Univ., Ritsumeikan Univ.*)

P1-12 Synthesis of zinc 20-substituted chlorophyll derivatives and their self-aggregation
Ayaka WADA, Hitoshi TAMIAKI (*Ritsumeikan Univ.*)

P1-13 Self-aggregation of chlorophyll derivatives in a lipid bilayer of liposomes
Tomohiro MIYATAKE, Soichi NAKAYAMA (*Ryukoku Univ.*)

P1-14 Self-assebly of cationic zinc chlorin in anionic polymer solutions
Hisato OKI, Yuki HASUNUMA, Tomohiro MIYATAKE (*Ryukoku Univ.*)

P1-15 Supramolecules with chlorosomal self-aggregates for artificial photosynthetic light-harvesting antennas
Sunao SHOJI, Hitoshi TAMIAKI (*Ritsumeikan Univ.*)

P1-16 Direct observation of ultrafast energy transfer in light-harvesting antenna complex conjugated with artificial dye.
Yusuke YONEDA, Tetsuro KATAYAMA, Yutaka NAGASAWA, Hiroshi MIYASAKA, Naoto MIZUTANI, Tomoyasu NOJI, Takehisa DEWA (*Osaka Univ., Nagoya Institute of Technology.*)

P1-17 Controlled regioselective amination of peryleneimides: Syhthesis and applications
Zafar AHMED, Lijo GEORGE, Helge LEMMETYINEN, Francisco MARTINEZ, Sergio Octavio VASQUEZ, Alexander EFIMOV (*Tampere Univ. of Technology, Univ. de Chile*)

P1-18 Excited-state properties of polypyridyl ruthenium(II) complexes in ion exchange resins
Akitaka ITO, Noriaki KISHIDA, Yoshio TEKI (*Osaka City Univ.*)

P1-19 Synthesis and optical property of linear shape rhenium complex
Yuki FUKASAWA, Kenji OHASHI, Hiroyuki TAKEDA, Tatsuki MORIMOTO, Osamu ISHITANI (*Tokyo Institute of Technology, Tokyo Univ. of Technology*)

P1-20 Development of artificial light-harvesting antenna systems using mesororous silica mimicking chlorosomes
Takuya MIYANAGA, Sunao SHOJI, Yasutomo GOTO, Shinji INAGAKI, Hitoshi TAMIAKI (*Ritsumeikan Univ., Toyota Central R&D Labs., Inc.*)

P1-21 Synthesis of 3^1-amino-analogs of bacteriochlorophyll-*d* and self-aggregations of their 3^1-epimers
Hiroaki WATANABE, Tomoaki NAGAI, Hitoshi TAMIAKI (*Ritsumeikan Univ.*)

P1-22 Quantum coherence between B800 and B850 assemblies of light-harvesting complex from purple bacteria observed by 5 fs optical pulses
Daisuke KOSUMI, Tomoko HORIBE, Mitsuru SUGISAKI, Richard COGDELL, Hideki HASHIMOTO (*Osaka City Univ., Univ. of Glasgow*)

P1-23 Isolation of various chlorosomes and FMO proteins toward construction of the artificial photosynthetic system
Misaki RYONO, Jiro HARADA, Yusuke TSUKATANI, Tadashi MIZOGUCHI, Hitoshi TAMIAKI (*Ritsumeikan Univ., Kurume Univ., Tokyo Institute of Technology*)

P1-24 Construction of organic photovoltaic cells using carotenoid as electron donor and chlorophyll derivatives as electron acceptors
Shin-ichi SASAKI, Taojun ZHUANG, Toshitaka IKEUCHI, Xiao-Feng WANG (*Nagahama Institute of Bio-Science and Technology, Yamagata Univ., Jilin Univ.*)

P1-25 Synthesis of chlorophyll dimers linked with a disulfide bond and their intramolecular energy transfer
Kifa KIM, Mari YOSHIZATO, Shin-ichi SASAKI, Hitoshi TAMIAKI (*Ritsumeikan Univ., Nagahama Institute of Bio-Science and Technology*)

P1-26 Thermal stabilities of light-harvesting complexes adsorbed on an alumina surface
Yuuta SHIBUYA, Ryotaro UENO, Akane FUJITA, Akira YAMAGUCHI (*Ibaraki Univ.*)

P1-27 Effects of center metals on phthalocyanine derivatives with distorted π-system
Takafumi ENOMOTO, Masaya OKAMURA, Arisa FUKATSU, Mio KONDO, Shigeyuki MASAOKA (*Institute for Molecular Science, The Graduate Univ. for Advanced Studies*)

P1-28 Light-dependent changes of the composition related to bacteriochlorophyll-*e* homologs and its epimers
Chisa OKADA, Tadashi MIZOGUCHI, Jiro HARADA, Hitoshi TAMIAKI (*Ritsumeikan Univ., Kurume Univ.*)

P1-29 Theoretical calculation of absorption spectrum of carotenoid
Chiasa URAGAMI, Hideki HASHIMOTO (*Osaka City Univ.*)

P1-30 Construction of carotenoid semi-condensed system: A model of photosynthetic antenna
Shohei KITA, Ritsuko FUJII, Hideki HASHIMOTO (*Osaka City Univ.*)

P1-31 Functional modulation of light-harvesting complex 2 (LH2) by conjugated artificial fluorophores: Intra- and inter-complex energy transfer and photocurrent generation
Takehisa DEWA, Tomoyasu NOJI, Naoto MIZUTANI, Yusuke YONEDA, Tetsuro KATAYAMA, Yutaka NAGASAWA, Hiroshi MIYASAKA, Shigeru ITOH, Mamoru NANGO (*Nagoya Institute of Technology, Osaka Univ., Nagoya Univ., Osaka City Univ.*)

P1-32 Excited-state dynamics of carotenoid-chlorophyll artificial light-harvesting antenna in

femtosecond to microsecond time regime
Tomoya NISHIGUCHI, Daisuke KOSUMI, Yutaka AMAO, Hideki HASHIMOTO (*Osaka City Univ.*)

P1-33 Plasmonic nanoantenna interfaces for photoelectrochemical reactions
Tetsu TATSUMA, Hiroyasu NISHI, Emiko KAZUMA, Tokuhisa KAWAWAKI, Akihiro ASAKURA (*The Univ. of Tokyo*)

P1-34 Scaled up microchannel reactor for photo [2+2] dimerization of isophorone as an antenna to introduce excitation light to reaction site
Hisanao USAMI, Naoya TAKANO, Kazuhide OHTA (*Shinshu Univ.*)

P1-35 Analysis of photonic crystalline properties of porous anodic alumina
Satoshi YONEDA, Akira YAMAGUCHI, Hisanao USAMI (*Shinshu Univ., Ibaraki Univ.*)

P1-36 Encapsulation of an enzyme into nanoporous-walloed silica nanotube-inorganic composite membrane
Akira YAMAGUCHI, Tetsuji ITOH (*Ibaraki Univ, AIST*)

P1-37 Synthesis of zinc bacteriochlorophyll a derivatives possessing unnatural esterifying chains and their reconstitution into light-harvesting complex 2 of purple photosynthetic bacteria
Yoshitaka SAGA, Kenji KAWAMURA (*Kinki Univ.*)

P1-38 Application of borondipyrromethene (bodipy) dyads as sensitizers in photoelectrochemical cells for artificial photosynthesis
Pau FARRAS, Thais MADEIRA, H. LEMMETYINEN, N.V. TKACHENKO, A.C. BENNISTONA (*Newcastle Univ., Tampere Univ.*)

P1-39 Metal-coordinated peptide *β*-sheets for artificial photosynthesis
Tsukasa MIZUTARU, Toru NAKAYAMA, Taro SAKURABA, Yohei YAMAMOTO (*Univ. of Tsukuba*)

P2 Hydrogen Production

P2-01 In situ generation of nickel-based active species within a macroreticular acidic resin for H_2 evolution from water
Kohsuke MORI, Hiroki KAKUDO, Hiromi YAMASHITA (*Osaka Univ.*)

P2-02 Solar hydrogen from cobaloxime/graphitic carbon nitride hybrid system in a continuous-sampling reaction system
Xiaobo LI, Ward ANTONY, Masters ANTHONY, Maschmeyer THOMAS (*The Univ. of Sydney*)

P2-03 Structural improvement of $CaFe_2O_4$ by metal doping toward enhanced cathodic

photocurrent
Keita SEKIZAWA, Takamasa NONAKA, Keiichirou OISHI, Takeo ARAI, Takeshi MORIKAWA (*Toyota Central R&D Labs., Inc.*)

P2-04 Molecular hydrogen formation through hydrazine decomposition in an organo-photocatalysis system of n-type fullerene/p-type zinc phthalocyanine bilayer
Toshiyuki ABE, Naohiro TAIRA, Yoshinori TANNO, Yuko KIKUCHI, Keiji NAGAI (*Hirosaki Univ., Tokyo Institute of Technology*)

P2-05 Surface ligand dependence of a photocatalytic hydrogen production system composed of photosensitizing quantum dots and 3d-metal molecular catalysts
Kana SAWAGUCHI, Masaki YOSHIDA, Atsushi KOBAYASHI, Masako KATO (*Hokkaido Univ.*)

P2-06 Development of the heterologous expression system of the group IV [NiFe]-hydrogenase
Yasuhito SHOMURA (*Univ. of Hyogo*)

P2-07 Amine-functionalized MIL-101(Cr) with imbedded platinum nanoparticles as a durable photocatalyst for hydrogen production from dye solution
Meicheng WEN, Yasutaka KUWAHARA, Kohsuke MORI, Hiromi YAMASHITA (*Osaka Univ., Kyoto Univ.*)

P2-08 Electrochemical synthesis and characterization of a mesoporous nickel oxide photocathode
Shuhei KAWATA, Debraj CHANDRA, Kenji SAITO, Tatsuto YUI, Masayuki YAGI (*Niigata Univ.*)

P2-09 An impact of alkyl chain length for water splitting performance in carbazole-based visible light driven dye-sensitized water splitting hydrogen production
Motonori WATANABE, Hidehisa HAGIWARA, Yudai OGATA, Shen BISHOP, Shintaro IDA, Tanaka KEIJI, Tatsumi ISHIHARA (*Kyushu Univ.*)

P2-10 Anchoring group effects on anthraquinone dye-sensitized photocatalysts for hydrogen evolution
Yasukazu AKAKI, Fumiaki AMANO (*The Univ. of Kitakyushu*)

P2-11 Syntheses and redox properties of Mo_3S_4 complexes with schiff base ligands
Keisuke KAWAMOTO, Akio ICHIMURA, Hideki HASHIMOTO, Isamu KINOSHITA, Takanori NISHIOKA (*Osaka City Univ.*)

P2-12 Hydrogen accumulation in plastic bags by heterocystous cyanobacteria
Masaharu KITASHIMA, Hajime MASUKAWA, Ken SAKAI, Hidehiro SAKURAI, Kazuhito INOUE (*Kanagawa Univ., Kyushu Univ.*)

P2-13 Light-driven hydrogen production by hydrogenases and a Ru-complex inside a nanoporous glass plate under aerobic external conditions

Tomoyasu NOJI, Masaharu KONDO, Tetsuo YAZAWA, Hisao OSUKA, Yoshiki HIGUCHI, Mamoru NANGO, Shigeru ITOH, Takehisa DEWA (*Nagoya Institute of Technology, National Institute of Advanced Industrial Science and Technology, Univ. of Hyogo, Osaka City Univ., Nagoya Univ.*)

P2-14 Catalytic performance of Cu-Ni/Al_2O_3 for steam reforming of gasoline to produce hydrogen applied in SI. Engines
The Luong NGUYEN, Thu Huong Thi TRAN, Anh Trung TRAN, Minh Tuan PHAM, Anh Tuan LE (*Hanoi Univ. of Science and Technology*)

P2-15 Tailoring spray coated p-type Cu_2O photocathodes for solar driven hydrogen fuel generation from photoelectrocatalytic biomass refomration
Sudhagar PITCHAIMUTHU, Anitha DEVADOSS, Jennifer Christy A, Ravidhas C, Chiaki TERASHIMA, Kazuya NAKATA, Akira FUJISHIMA (*Tokyo Univ. of Science, Bishop Heber College*)

P2-16 A new RuPt-based photo-hydrogen-evolving molecular device tethered to an electron resorvoir unit
Masayuki MIYAJI, Kyoji KITAMOTO, Ken SAKAI (*Kyushu Univ.*)

P2-17 Electrochemical hydrogen production from water catalyzed by bis(dithiolato)nickelate(II) complexes
Keita KOSHIBA, Kosei YAMAUCHI, Ken SAKAI (*Kyushu Univ.*)

P2-18 Viologen inducted platinum(II)-terpyridine complexes as photochemical hydrogen evolution catalysts
Shu LIN, Kyoji KITAMOTO, Kosei YAMAUCHI, Ken SAKAI (*Kyushu Univ.*)

P2-19 Photochemical hydrogen evolution from water using diruthenium-based microporous porphyrin coordination polymers
Yusuke KATAOKA, Konomi KATAOKA, Ryohei FUJITA, Takahisa IKEUE, Tatsuya KAWAMOTO, Makoto HANDA, Wasuke MORI (*Shimane Univ., Kanagawa Univ.*)

P2-20 Syntheses, structures, and photo-induced hydrogen evolution of 3d transition metal complexes bearing o-phenylenediamine
Masaki YOSHIDA, Sho UENO, Akane USUI, Atsushi KOBAYASHI, Masako KATO (*Hokkaido Univ., JST-PRESTO*)

P2-21 Solar-driven thermochemical hydrogen production from water using perovskite oxides
Yoshihiro YAMAZAKI, Chih-Kai YANG, Sossina HAILE (*Kyushu Univ., California Institute of Technology*)

P3 Oxygen Evolution

P3-01 Mechanistic study of non-heme iron water oxidation catalysts
Alexander Rene PARENT, Takashi NAKAZONO, Shu LIN, Satoshi UTSUNOMIYA, Ken SAKAI (*Kyushu Univ.*)

P3-02 Non-sacrificial water photo-oxidation activity of lamellar calcium niobate induced by exfoliation
Kazuhiko MAEDA, Takayoshi OSHIMA (*Tokyo Institute of Technology*)

P3-03 Environment of TyrZ in photosystem II from *Thermosynechococcus elongatus* in which psbA2 is the D1 protein
Miwa SUGIURA, Shogo OGAMI, Fabrice RAPPAPORT, Alain BOUSSAC (*Ehime Univ., IBPC, CEA Saclay*)

P3-04 Investigation of Cobalt-Phosphate (Co-Pi) cocatalyst on a photoelectrode by electrochemichal XAFS
Takehiro MINEO, Masaaki YOSHIDA, Takumi YOMOGIDA, Hiroshi KONDOH (*Keio Univ.*)

P3-05 Water oxidation catalyzed by ruthenium complexes having a Ru-C bond
Tohru WADA, Naohide HIRAIDE, Yukina ONISHI, Yuji MIYAZATO (*Rikkyo Univ., Tokyo Denki Univ.*)

P3-06 Redox properties of dinuclear ruthenium complexes as an active catalyst for water oxidation
Kosuke TAKAHASHI, Masanari HIRAHARA, Sho NAGAI, Taisei SATO, Kenji SAITO, Tatsuto YUI, Masayuki YAGI (*Niigata Univ.*)

P3-07 Photoinduced hole transfer from a $SrTiO_3$ photoelectrode to a MnOx cocatalyst for oxygen evolution studied by in situ X-ray absorption spectroscopy
Masaaki YOSHIDA, Takumi YOMOGIDA, Takehiro MINEO, Hiroshi KONDOH (*Keio Univ.*)

P3-08 Syntheses and electrochemistry of pentanuclear metal clusters
Hitoshi IZU, Masaya OKAMURA, Reiko KUGA, Praneeth VIJAYENDRAN, Nagisa KATSUTA, Satoshi KAWATA, Mio KONDO, Shigeyuki MASAOKA (*Institute for Molecular Science, The Graduate Univ. for Advanced Studies, Fukuoka Univ., JST-ACT-C*)

P3-09 Construction of Z-scheme Ag_3PO_4/g-C_3N_4 composite photocatalytic system for O_2 evolution
Xiaofei YANG, Markus ANTONIETTI, Menny SHALOM (*Max Planck Institute of Colloids and Interfaces*)

P3-10 Polyoxometalate stabilized ruthenium oxide active for water oxidation
Masahiro SADAKANE (*Hiroshima Univ.*)

P3-11 Highly efficient electrocatalysis for water oxidation on cobalt oxide-based electrodes

Takeshi MASAKI, Kaoru AISO, Kenji SAITO, Tatsuto YUI, Masayuki YAGI (*Niigata Univ., JST-PRESTO*)

P3-12 Electrocatalytic and photoelectrocatalytic water oxidation on iron oxide-based electrodes
Hiroki OSANAI, Kenji SAITO, Tatsuto YUI, Masayuki YAGI (*Niigata Univ.*)

P3-13 Electrocatalytic water oxidation and electrochemical properties of mononuclear ruthenium complexes
Junichiro HONTA, Kenji SAITO, Tatsuto YUI, Masayuki YAGI (*Niigata Univ.*)

P3-14 Hydrogen reduction treatment on vsible-light-responsive titania photocatalysts codoped with tantalum and chromium
Masashi NAKATA, Fumiaki AMANO (*The Univ. of Kitakyushu*)

P3-15 Effects of cation doping with different oxidation numbers on rutile titania photocatalysts for water oxidation
Ryosuke TOSAKI, Fumiaki AMANO (*The Univ. of Kitakyushu*)

P3-16 Highly integrated water-oxidation catalysts synthesized by ultra-rapid solvothermal reaction
Masataka OHTANI, Tomoyuki MURAOKA, Hiroko TOORIYAMA, Kazuya KOBIRO (*Kochi Univ. of Technology*)

P3-17 Trial to assemble an artificial photosyntheic system using water as an electron donor for reduction of NAD^+ co-enzyme
Yasuo MATSUBARA (*JST-PRESTO, BNL*)

P3-18 Nanostructured manganese and cobalt oxides as highly active water oxidation catalysts
Prashanth MENEZES, Arindam INDRA, Holger DAU, Matthias DRIESS (*Technische Universität Berlin, Freie Univ. Berlin*)

P3-19 An efficient nonheme manganese(IV)-oxo complex generated in photocatalytic reaction with water as an oxygen source
Xiujuan WU, Xiaonan YANG, Licheng SUN (*Dalian Univ. of Technology, KTH Royal Institute of Technology*)

P3-20 Kinetics studies of water oxidation catalyzed by mononuclear ruthenium complexes
Yuta TSUBONOUCHI, Ken SAKAI (*Kyushu Univ.*)

P3-21 Electrochemical water oxidation catalysis triggered by one-electron transfer
Yusuke TAMAKI, Aaron VANNUCCI, Christopher DARES, Robert BINSTEAD, Thomas MEYER (*Univ. of North Carolina at Chapel Hill*)

P4 Water Splitting

P4-01 Chiral incomplete-cubane type manganese(III) clusters containing a bridging methoxido or hydroxido ligand
Marina INOUE, Takayoshi SUZUKI, Yukinari SUNATSUKI, Akira FUYUHIRO, Re NAZZARENO (*Okayama Univ., Osaka Univ., Univ. G. D'Annunzio*)

P4-02 Photochemical oxygenation of cyclohexene sensitized by metalloporphyrin-clay complex
Shota HOSHINO, Takamasa TSUKAMOTO, Tetsuya SHIMADA, Tsutomu SHIRAGAMI, Shinsuke TAKAGI (*Tokyo Metropolitan Univ., Univ. of Miyazaki*)

P4-03 Hydrogen evolution over Cu(I)-substituted $LaTa_7O_{19}$ under visible light
Hideki KATO, Arisa TAKEDA, Makoto KOBAYASHI, Masato KAKIHANA (*Tohoku Univ.)*

P4-04 Water splitting under visible-light irradiation using a Z-scheme photocatalyst composed of semiconductor, metal-complex, and reduced graphene oxide
Tomiko SUZUKI, Akihide IWASE, Hiromitsu TANAKA, Shunsuke SATO, Akihiko KUDO, Takeshi MORIKAWA (*Toyota Central R&D Labs., Inc., Tokyo Univ. of Science*)

P4-05 Nitrogen and transition-metal codoped titania nanotube arrays for visible-light-sensitive photoelectrochemical water oxidation
Takeshi MORIKAWA, Tomiko SUZUKI, Gaku KITAHARA, Takeo ARAI, Yoriko MATSUOKA (*Toyota Central R&D Labs., Inc.*)

P4-06 A photoelectrochemical water-splitting system featuring organic p/n bilayer
Toshiyuki ABE, Katsuma FUKUI, Takuya NAKATA, Keiji NAGAI, Hideki KATO (*Hirosaki Univ., Tokyo Institute of Technology, Tohoku Univ.*)

P4-07 Visible-light induced two-electron oxidation of water to hydrogen peroxide sensitized by di(hydroxo)porphyrin Ge^{IV} complex
Tsutomu SHIRAGAMI, Haruki NAKAMURA, Jin MATSUMOTO, Masahide YASUDA (*Univ. of Miyazaki*)

P4-08 Efficient H_2 production from water splitting using modified $CuInS_2$ photocathodes
Takashi HARADA, Shigeru IKEDA, GUNAWAN, Wilman SEPTINA, Michio MATSUMURA (*Osaka Univ.*)

P4-09 Development of photo-oxygen-evolving molecular systems based on tris(2,2'-bipyridine)ruthenium(II) derivatives tethered to multi-electron-storage moieties
Keiya YAMAMOTO, Kyoji KITAMOTO, Ken SAKAI (*Kyushu Univ.*)

P4-10 Axial ligand adsorption of aluminum porphyrins on titanium oxide
Satomi ONUKI, Daisuke YAMAMOTO, Siby MATHEW, Fazalurahman KUTTASSERY, Shogo SAGAWA, Yu NABETANI, Hiroshi TACHIBANA, Haruo INOUE (*Tokyo Metropolitan Univ.*)

P4-11 Visible light induced oxygenation of substrates with water sensitized by silicon porphyrins

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

P4-12 Synthesis of sulfide photocatalysts with defect chalcopyrite structure from precursors prepared by polymerizable complex method
Ciro QUINTANS, Hideki KATO, Makoto KOBAYASHI, Hiroshi KAGA, Akihide IWASE, Akihiko KUDO, Masato KAKIHANA (*Tohoku Univ., Tokyo Univ. of Science*)

P4-13 Improved photoelectrochemical performance of p-type semiconductor photoelectrode by incorporating reduced graphene oxide
Akihide IWASE, Akihiko KUDO (*Tokyo Univ. of Science*)

P4-14 Synthesis, photophysical and electrochemical properties of tin metalloporphyrins as water oxidation catalyst
Thomas ARUN, Daisuke YAMAMOTO, Satomi ONUKI, Yu NABETANI, Hiroshi TACHIBANA, Haruo INOUE (*Tokyo Metropolitan Univ.*)

P4-15 Fabrication of novel aluminium porphyrin/semiconductor hybrid for electron transfer system
Daisuke YAMAMOTO, Shogo SAGAWA, Siby MATHEW, Fazalurahman KUTTASSERY, Satomi ONUKI, Yu NABETANI, Hiroshi TACHIBANA, Haruo INOUE (*Tokyo Metropolitan Univ.*)

P4-16 Electrocatalytic water activation mediated by aluminum porphyrins
Fazalurahman KUTTASSERY, Shogo SAGAWA, Siby MATHEW, Daisuke YAMAMOTO, Satomi ONUKI, Yu NABETANI, Hiroshi TACHIBANA, Haruo INOUE (*Tokyo Metropolitan Univ.*)

P4-17 Inhibition mechanism of the water-splitting reaction of photosystem II by iodine ions
Keisuke KAWAKAMI, Daisuke HAGIWARA, Yasufumi UMENA, Yoshimasa FUKUSHIMA, Akitaka ITO, Yoshio TEKI, Jian-Ren SHEN, Nobuo KAMIYA (*Osaka City Univ., Okayama Univ.*)

P4-18 Solar water splitting using a directly-formed $BiVO_4$ electrode prepared by a microwave-assisted chemical bath deposition method without any template
Qingxin JIA, Akihide IWASE, Akihiko KUDO, Kazunari DOMEN (*The Univ. of Tokyo, Tokyo Univ. of Science*)

P4-19 Synthesis of nitride semiconductors by the use of solid nitrogen sources and those photoerectorochemical properties
Takashi SUGIURA, Soichiro BAN, Takuya NAKA, Kousuke KAWADE, Kazuhiro MANSEKI (*Gifu Univ.*)

P4-20 CdS-based photoelectrodes for solar water splitting

Ashraf ABDEL HALEEM, Yoshinori NARUTA (*Chubu Univ., JST-ACT-C*)

P4-21 Preparation and efficient visible-light-driven water oxidation of an N_2-intercalated and nano-structured WO_3 photoanode
Dong LI, Debraj CHANDRA, Kenji SAITO, Tatsuto YUI, Masayuki YAGI (*Niigata Univ.*)

P4-22 Modification effects of hexaphyrins on water splitting activity of GaN: ZnO photocatalyst
Hidehisa HAGIWARA, Motonori WATANABE, Shintaro IDA, Tatsumi ISHIHARA (*Kyushu Univ.*)

P4-23 Low-cost fabrication of $BiCu_2VO_6$ photoanode and $CuBi_2O_4$ photocathode for overall water splitting
Yukihiro NAKABAYASHI, Masami NISHIKAWA, Yoshio NOSAKA (*Nagaoka Univ. of Technology*)

P4-24 Crystallographic studies on the valence of Mn atoms in oxygen-evolving photosystem II using X-ray absorption techniques
Yasufumi UMENA, Keisuke KAWAKAMI, Jian-Ren SHEN, Nobuo KAMIYA (*Osaka City Univ., JST-PRESTO, Okayama Univ.*)

P4-25 Highly efficient heterogeneous synthesis and study on chemical properties of aluminum porphyrins as molecular photoelectrocatalysts for artificial photosynthesis
Siby MATHEW, Fazalurahman KUTTASSERY, Daisuke YAMAMOTO, Satomi ONUKI, Yu NABETANI, Hiroshi TACHIBANA, Haruo INOUE (*Tokyo Metropolitan Univ.*)

P4-26 Exploring Si(IV) porphyrins as WOC for artificial photosynthesis
Sebastian Nybin REMELLO, Takehiro HIRANO, Daisuke YAMAMOTO, Satomi ONUKI, Yu NABETANI, Hiroshi TACHIBANA, Haruo INOUE (*Tokyo Metropolitan Univ.*)

P4-27 Reaction mechanism of photochemical hydrogen evolution from water by graphitic carbon nitride. A density functional study
Manabu SUGIMOTO, Kohei GOTO (*Kumamoto Univ.*)

P4-28 Relative band positions of some chalcogenide photocathodes estimated by a facile photoelectrochemical method
Shigeru IKEDA, Wilman SEPTINA, Gunawan, Feng JIANG, Shinji SOGAWA, Takashi HARADA, Yutaka AMAO, Ryu ABE, Michio MATSUMURA (*Osaka Univ., Osaka City Univ., Kyoto Univ.*)

P4-29 Native structure of photosystem II at 1.95 Å resolution revealed by a femtosecond X-ray laser
Michi SUGA, Fusamichi AKITA, Kunio HIRATA, Go UENO, Hironori MURAKAMI, Yoshiki NAKAJIMA, Tetsuya SHIMIZU, Keitaro YAMASHITA, Masaki YAMAMOTO, Hideo AGO, Jian-Ren SHEN (*Okayama Univ., RIKEN SPring-8 Center*)

P4-30 A two-step water splitting coupling of photocatalytic water oxidation and electrochemical proton reduction

Fei LI, Fengshou YU, Licheng SUN (*Dalian Univ. of Technology*)

P4-31 Interfacing electrocatalysts with photo-responsive surfaces for solar water splitting

Khurram JOYA, Kazuhiro TAKANABE (*King Abdullah Univ. of Science and Technology*)

P4-32 Plasmon-induced light energy conversion on gold nanoparticles/semiconductor system

Hiroaki MISAWA, Xu SHI, Yuqing ZHONG, Tomoya OSHIKIRI, Kosei UENO (*Hokkaido Univ.*)

P5 CO_2 Reduction

P5-01 Canceled 3D hierarchical artificial leaf of perovskite titanates towards CO_2 photoreduction into hydrocarbon fuels

Han ZHOU, Tongxiang FAN, Di ZHANG, Jinhua YE (*Shanghai Jiaotong Univ., International Center for Materials Nanoarchitectonics (WPI-MANA), National Institute for Materials Science*)

P5-02 High yeild electrochemical production of formaldehyde from CO_2 and seawater at boron-doled diemond elctrode

Kazuya NAKATA, Chiaki TERASHIMA, Akira FUJISHIMA, Yasuaki EINAGA (*Tokyo Univ. of Science, Keio Univ.*)

P5-03 Development of photocatalytic or photoelectrochemical CO redution using water as a electron donor

Teruhisa OHNO, Sunao KAMIMURA, Naoya MURAKAMI (*Kyushu Institute of Technology*)

P5-04 Soluble-type Escherichia coli Formate dehydrogenase and its application for the light-driven carbon dioxide reduction

Masaki IHARA, Tetsuya KUDO, Manami MIZUGUCHI, Izumi MATSUNO (*Shinshu Univ., JST-PRESTO*)

P5-05 Photocatalytic CO_2 reduction using cupper complexes as a photosensitizer and an iron complex as a catalyst

Hiroyuki TAKEDA, Osamu ISHITANI (*Tokyo Institute of Technology, JST-CREST*)

P5-06 Reduction of CO_2 with water over Ag/Ga_2O_3 photocatalysts prepared by impregnation and solution plasma methods

Tomoko YOSHIDA, Naoto YAMAMOTO, Tsuyoshi MIZUTANI, Muneaki YAMAMOTO, Satoshi OGAWA, Shinya YAGI, Hirofumi NAMEKI, Zhang LIKE, Hisao YOSHIDA (*Nagoya Univ., Aichi Center for Industry and Science Technology, Kyoto Univ.*)

P5-07 Photochemical reduction of CO_2 to CO in Ni- or Ag-cyclam aqueous solution

Mitsuru SAKANO, Shinichi MATSUMOTO, Hirohito HIRATA (*Toyota Motor Corporation*)

P5-08 Solar-to-CO conversion efficiency by wired PV cell system with cobalt oxide and gold nanoparticles catalysts
Yoshitsune SUGANO, Akihiko ONO, Ryota KITAGAWA, Jun TAMURA, Yuki KUDO, Eishi TSUTSUMI, Masakazu YAMAGIWA, Satoshi MIKOSHIBA (*Toshiba Corporation*)

P5-09 A new synthesis method of photofunctional multinuclear metal complexes
Yasuomi YAMAZAKI, Hiroyuki TAKEDA, Osamu ISHITANI (*Tokyo Institute of Technology, Tokyo Univ. of Tech., JST-CREST*)

P5-10 Studies on electrocatalytic CO_2 transformation by half-metallocene group 9 metals
Jeong Min JI, Dong-Il WON, Ho-Jin SON, Won-Sik HAN, Chongjin PAC, Sang Ook KANG (*Korea Univ., Seoul Women's Univ.*)

P5-11 Reduction of carbon dioxide using a ruthenium(II)-rhenium(I) supramolecular photocatalyst in an aqueous solution
Akinobu NAKADA, Kazuhide KOIKE, Kazuhiko MAEDA, Osamu ISHITANI (*Tokyo Institute of Technology, AIST*)

P5-12 Reduction of carbon dioxide with water on calcium titanate photocatalyst
Hisao YOSHIDA, Like ZHANG, Masumi SATO, Takeshi MORIKAWA, Tsutomu KAJINO, Mitsuru SAKANO, Takeshi SEKITO, Shinichi MATSUMOTO, Hirohito HIRATA (*Kyoto Univ., Nagoya Univ., Toyota Central R&D Labs., Inc., Toyota Motor Corporation*)

P5-13 Photoreduction of CO_2 with H_2O on synthesized $MgFe_2O_4$ using solution combustion method.
Suguru ABE, Syouhei YOKOYAMA, Yasuko MARUO, Takeshi KOMATSU, Mai TAKASHIMA, Jiro NAKAMURA (*Tohoku Institute of Technology, NTT Energy and Environment Systems Laboratories*)

P5-14 Absorption microspectroscopy of a CO_2 photoreduction system in a microflow device
Chikara ONO, Eri SAKUDA, Noboru KITAMURA (*Hokkaido Univ.*)

P5-15 Experimental approaches to high efficient photoreduction of CO_2 using ruthenium(II) complexes having arylborane units
Nanami ISHIZAKI, Mai TANAKA, Eri SAKUDA, Noboru KITAMURA (*Hokkaido Univ.*)

P5-16 Photoelectrochemical CO_2 reduction using Ru(II)-Re(I) metal complex on a NiO electrode
Go SAHARA, Ryu ABE, Takeshi MORIKAWA, Mitsuru SAKANO, Tsutomu KAJINO, Kazuhiko MAEDA, Osamu ISHITANI (*Tokyo Institute of Technology, Kyoto Univ., Toyota Central R&D Labs., Inc., Toyota Motor Corporation*)

P5-17 Photochemical CO_2 reduction catalyzed by trans(Cl)-Ru(bpy)$(CO)_2Cl_2$: The catalyst concentration effect

Yusuke KURAMOCHI, Kyohei FUKAYA, Akito ENOMOTO, Hitoshi ISHIDA (*Kitasato Univ.*)

P5-18 Selective CO formation in photocatalytic CO_2 reduction by a $Ru(bpy)(CO)_2Cl_2$-type complex bearing bulky substituents at 6,6'-positions in the 2,2'-bipyridyl ligand
Jun ITABASHI, Yusuke KURAMOCHI, Kiminori USHIDA, Hitoshi ISHIDA (*Kitasato Univ.*)

P5-19 Identification of reaction intermediates in photochemical CO_2 reduction sensitized by rhenium bipyridine complexes
Pratheesh VISWAMBHARAN NAIR, Yoki KO, Daisuke YAMAMOTO, Yu NABETANI, Hiroshi TACHIBANA, Haruo INOUE (*Tokyo Metropolitan Univ.*)

P5-20 Photochemical CO_2 reduction catalyzed by novel ruthenium-peptide complexes
Hitoshi ISHIDA, Masaya KAMIYA, Kousuke MATSUURA, Makoto YOSHIDA, Yusuke KURAMOCHI (*Kitasato Univ.*)

P5-21 Highly efficient mononuclear iridium complex photocatalyst for CO_2 reduction under visible light
Shunsuke SATO, Takeshi MORIKAWA (*Toyota Central R&D Labs., Inc.*)

P5-22 Immopolization of the iron porphyrin dimers on a FTO electrode for efficient heterogeneous electrocatalytic CO_2 reduction
Eman MOHAMED, Zaki ZAHRAN, Yoshinori NARUTA (*Chubu Univ.*)

P5-23 Ring-shaped Re(I) multinuclear complexes: Highly efficient photosensitizers in photocatalytic CO_2 reduction
Jana ROHACOVA, Osamu ISHITANI (*Tokyo Institute of Technology*)

P5-24 In-situ FT-IR study on CO_2 reduction with water over Ag loaded Ga_2O_3 photocatalysts
Muneaki YAMAMOTO, Tomoko YOSHIDA, Naoto YAMAMOTO, Shinya YAGI (*Nagoya Univ.*)

P5-25 Superiority of cofacial iron porphyrin dimers over the corresponding monomers for electrocatalytic CO_2 reduction
Zaki ZAHRAN, Eman MOHAMED, Yoshinori NARUTA (*Chubu Univ.)*

P5-26 Capturing carbon dioxide for photocatalytic CO_2 reduction
Tatsuki MORIMOTO, Takuya NAKAJIMA, Eishiro KATO, Osamu ISHITANI (*Tokyo Univ. of Technology, JST-PRESTO, Tokyo Institute of Technology*)

P5-27 Preparation of photoactive organic-inroganic hybrid microcapsules with zinc porphyrin and enzyme
Fumio KURAYAMA, Hiroyuki TAMURA, Sho MIYAMOTO, Kizuku KIMURA, Takeshi FURUSAWA, Masahide SATO, Noboru SUZUKI (*Utsunomiya Univ.*)

P5-28 High-turnover visible-light photoreduction of CO_2 by hybrid materials (ReC/TiO_2/Dye)
Ho-Jin SON, Dong-Il WON, Yang-Jin CHO, Qiankai BA, Jeong-Min JI (*Korea Univ.*)

P5-29 Photoreduction of CO_2 based on various transition metal complexes having arylborane units and arylborane compounds
Eri SAKUDA, Nanami ISHIZAKI, Mai TANAKA, Noboru KITAMURA (*Hokkaido Univ., JST-PRESTO*)

P5-30 Substituent effects of re complex on the photoreduction under supercritical CO_2 conditions
Hajime KAWANAMI, David GRILLS, Maya CHATTERJEE, Takayuki ISHIZAKA (*National Institute of Advanced Industrial Science and Technology, Brookhaven National Laboratory*)

P5-31 Synthesis of new Ru(II)-Re(I) supramolecular complexes and their photocatalysis for CO_2 reduction
Kei OHKUBO, Kazuhide KOIKE, Osamu ISHITANI (*Tokyo Institute of Technology, National Institute of Advanced Industrial Science and Technology*)

P5-32 Development of proton-responsive catalysts with pendent bases for CO_2 hydrogenation
Yuichiro HIMEDA, Yuki SUNA, Naoya ONISHI, Shaoan XU, Yuichi MANAKA, James T. MUCKERMAN, Etsuko FUJITA (*National Institute of Advanced Industrial Science and Technology, Brookhaven National Laboratory*)

P5-33 Reduction of carbon dioxide with water on sodium hexatitanate photocatalyst
Hisao YOSHIDA, Masumi SATO, Like ZHANG, Takeshi MORIKAWA, Tsutomu KAJINO, Mitsuru SAKANO, Takeshi SEKITO, Shinichi MATSUMOTO, Hirohito HIRATA (*Kyoto Univ.*)

P5-34 An organic hydride transfer reaction converting carbon dioxide into formate by a ruthenium NAD model complex
Hideki OHTSU, Koji TANAKA (*Univ. of Toyama, Kyoto Univ.*)

P5-35 Effect of chloride ion addition on the photocatalytic conversion of CO_2 in an aqueous solution using Ni-Al LDH as a photocatalyst
Shoji IGUCHI, Kentaro TERAMURA, Saburo HOSOKAWA, Tsunehiro TANAKA (*Kyoto Univ.*)

P5-36 Band-engineering in photochemical CO_2 conversion system with GaN-Si tandem photo-electrode
Takeyuki SEKIMOTO, Masahiro DEGUCHI, Satoshi YOTSUHASI, Yuka YAMADA, Yusuke UETAKE, Kazuhiro OHKAWA (*Panasonic Corporation, Tokyo Univ. of Science*)

P5-37 Photocatalytic conversion of CO_2 by H_2O as an electron donor over Ag/MO/Ta_2O_5 (M = Mg, Ca, Sr, Ba)

Hiroyuki TATSUMI, Zheng WANG, Kentaro TERAMURA, Saburo HOSOKAWA, Tsunehiro TANAKA (*Kyoto Univ., JST-PRESTO*)

P5-38 Combinatorial screening in electrochemical CO_2 reduction toward selective production of methane
Hiroshi HASHIBA, Satoshi YOTSUHASHI, Masahiro DEGUCHI, Yuka YAMADA (*Panasonic Corporation*)

P6 Advanced Measurement and Spectroscopy

P6-01 $NaTaO_3$ photocatalysts doped with Sr in A-site or in B-site
Longjie AN, Hiroshi ONISHI (*Kobe Univ.*)

P6-02 Energy-resolved measurement of electron traps in metal oxide particulate photocatalysts: reversed double-beam photoacoustic spectroscopy
Bunsho OHTANI, Akio NITTA, Mai TAKASE (*Hokkaido Univ.*)

P6-03 Charge carrier dynamics in commercially availavle TiO_2 photocatalysts studied by time-resolved microwave conductivity
Shohei NAKAJIMA, Ryuzi KATOH (*Nihon Univ.*)

P6-04 The evaluation of photoelectrode efficiency and internal resistance of WO_3 particulate films for water oxidation
Shinichiro KOGA, Fumiaki AMANO (*The Univ. of Kitakyushu*)

P6-05 Solvothermal synthesis of Ga-doped $SrTiO_3$ photocatalysts
Yohan PARK, Hiroshi ONISHI (*Kobe Univ.*)

P6-06 Spectroscopic and photophysical properties of novel tricarbonyl rhenium(I) complexes with two arylborane charge transfer units
Yuanyuan KANG, Akitaka ITO, Eri SAKUDA, Noboru KITAMURA (*Hokkaido Univ., Osaka City Univ.*)

P6-07 Sn-doped TiO_2 photocatalysts prepared via sol-gel method with citric acid
Hao Liang LI, Hiroshi ONISHI (*Kobe Univ.*)

P6-08 Charge accumulation during oxygen evolution catalysis on iridium oxide and manganese oxide
Hideshi OOKA, Akira YAMAGUCHI, Kazuhito HASHIMOTO, Ryuhei NAKAMURA (*The Univ. of Tokyo, RIKEN*)

P6-09 Fabrication of high-efficiency light energy conversion devices using bacteriorhodopsin and nanophotonic structures
Takahiro KAJI, Katsuyuki KASAI, Shin-ichiro INOUE, Yoshihiro HARUYAMA, Toshiki

YAMADA, Yukihiro TOMINARI, Rieko UEDA, Toshifumi TERUI, Shukichi TANAKA, Akira OTOMO (*NICT*)

P6-10 The QYM-01 photoreaction quantum yield evaluation system
Hirokazu TANIGUCHI, Tsuyoshi TSUCHIBUCHI, Takahide HIRAMATSU (*Shimadzu Corporation*)

P6-11 Potential gradient and photocatalytic activity of ultrathin pn-junction surface prepared with oxide nanosheets
Shintaro IDA, Akihide TAKASHIBA, Shota KOGA, Hidehisa HAGIWARA, Tatsumi ISHIHARA (*Kyushu Univ.*)

P6-12 Time-resolved vis to mid-IR absorption study on the behavior of photogenerated charge carriers in photocatalysts
Akira YAMAKATA, Masayuki KAWAGUCHI, Jun KUBOTA, Kazunari DOMEN (*Toyota Technological Institute, The Univ. of Tokyo*)

P6-13 Electrochemical measurement of metal complexes in homogeneous solution under photoirradiation
Arisa FUKATSU, Masaya OKAMURA, Akane SHIBATA, Mio KONDO, Shigeyuki MASAOKA (*Institute for Molecular Science, The Graduate Univ. for Advanced Studies, JST-ACT-C*)

P6-14 Infrared absorption spectrum of electrons excited in TiO_2 photocatalysts
Takao MIZUTANI, Hiroshi ONISHI (*Kobe Univ.*)

P6-15 Time-resolved EPR study on ruthenium(II) complex having an arylborane charge-trnsfer unit
Masanobu WAKASA, Tomoaki YAGO, Rei KUMAGAI, Eri SAKUDA, Noboru KITAMURA (*Saitama Univ., Hokkaido Univ.*)

P6-16 Ultrafast molecular structure dynamics of dye sensitized solar cell studied by femtosecond infrared spectroscopy
Hidenori NOGUCHI, Kohei UOSAKI (*NIMS*)

P6-17 Direct observation of ultrafast molecular deformation by time-resolved X-ray measurements
Shunsuke NOZAWA, Shin-ichi ADACHI (*High Energy Accelerator Research Organization*)

P7 Electron Transfer

P7-01 No presentation

P7-02 Vibrational coherence and ultrafast dynamic stokes shift observed for naphthacene

derivative in inert and electron donating solvents
Yutaka NAGASAWA, Yusuke YONEDA, Shohei NAMBU, Eisuke TAKEUCHI, Hiroshi MIYASAKA (*Osaka Univ.*)

P7-03 Interfacial proton coupled electron transfer in TiO_2 photocatalysis: The criticle role of surface water molecule
Wenjing SONG, Xuesong WANG, Tao SHI, Hongwei JI, Chuncheng CHEN, Wanhong MA, Jincai ZHAO, Yanke CHE (*Chinese Academy of Sciences*)

P7-04 Investigation on photo-induced charge separation in CdS/CdTe nanopencils
Masanori SAKAMOTO, Makoto OKANO, Yoshihiko KANEMITSU, Toshiharu TERANISHI (*Kyoto Univ.*)

P7-05 Efficient photoinduced charge separation in self-assemblies of graphene oxide-perylenediimide hybrid layers
Mustafa SUPUR, Kei OHKUBO, Shunichi FUKUZUMI (*Osaka Univ.*)

P7-06 Verifying the inter-valence charge transfer (IVCT) transition of metal complex using stark absorption spectroscopy
Yuishi OKADA, Storr TIM, Hideki HASHIMOTO, (*Osaka City Univ., Simon Fraser Univ.*)

P7-07 Evaluation of the charge transfer character of cobalt complexes due to light-induced valence tautomerism by stark spectroscopy
Yu FUKUDA, Koichi KATAYAMA, Masakazu HIROTSU, Hideki HASHIMOTO (*Osaka City Univ.*)

P7-08 Interspecies exchange of genes coding for subunits of photosynthetic reaction centers in purple bacteria: much production of rare photosynthetic pigment proteins found in atypical environments
Kenji NAGASHIMA, André VERMÉGLIO, Naoki FUSADA, Sakiko NAGASHIMA, Keizo SHIMADA, Kazuhito INOUE (*Kanagawa Univ., CEA-Cadarache, Tokyo Metropolitan Univ.*)

P7-09 Self-assembly of photosynthetic membrane protein onto a substrate by a genetic engineering
Masaharu KONDO, Toshihisa MIZUNO, Sakiko NAGAHIMA, Kenji NAGAHIMA, Takehisa DEWA, Mamoru NANGO (*Nagoya Institute of Technology, Kanagawa Univ., Osaka City Univ.,*)

P7-10 Photocatalytic oxidation of organic substrates by ruthenium(II)-pyridylamine complexes as catalysts
Takahiko KOJIMA, Shingo OHZU, Tomoya ISHIZUKA, Hiroaki KOTANI, Yuichirou HIRAI, Shunichi FUKUZUMI (*Univ. of Tsukuba, Osaka Univ.*)

P7-11 Electron-transfer and charge-separation in Ru(II)-Re(I) binuclear metal complex photocatalysts for CO_2 photoreduction
Kazuhide KOIKE, David C. GRILLS, Etsuko FUJITA, Yusuke TAMAKI, Kei OHKUBO, Osamu ISHITANI (*AIST, BNL, Tokyo Institute of Technology*)

P8 Others

P8-01 Development of visible light-active rhodium-modified titania working with a built-in redox mediator mechanism
Joanna KUNCEWICZ, Bunsho OHTANI (*Hokkaido Univ., Jagiellonian Univ.*)

P8-02 Photophysical photochemical properties of hybrids between a metal complex and polyoxometalate assisted with multivalent metal ion
Kenji OHASHI, Hiroyuki TAKEDA, Kazuhide KOIKE, Osamu ISHITANI (*Tokyo Institute of Technology, JST-CREST, AIST*)

P8-03 Localization of the extrinsic proteins in a higher plant photosystem II supercomplex
Kentaro IFUKU, Kunio IDO, Jon NIELD, Yoichiro FUKAO, Taishi NISHIMURA, Fumihiko SATO (*Kyoto Univ., Queen Mary Univ. of London, NAIST*)

P8-04 Synthesis of niobate nanoscrolls and their application to the photoelectrode of artificial photosynthesis cell
Yu NABETANI, Akino UCHIKOSHI, Soki MIYAJIMA, Syed Zahid HASSAN, Hiroshi TACHIBANA, Haruo INOUE (*Tokyo Metropolitan Univ.*)

P8-05 Dynamics of water molecules in light-driven ion pump proteins studied via time-resolved Fourier-transform infrared spectroscopy
Yuji FURUTANI, Kuniyo FUJIWARA (*Institute for Molecular Science*)

P8-06 Photocatalytic oxygenation of sulfides and alkenes by di- and trinuclear ruthenium complexes in aqueous media
Akiko INAGAKI, Siwas PHUNGSRIPHENG, Kazuyuki KOZAWA, Kotohiro NOMURA, Munetaka AKITA (*Tokyo Metropolitan Univ., Tokyo Institute of Technology*)

P8-07 Synthetic studies of active metal sites encapsulated in the ligand shell structure
Yasuhiro FUNAHASHI, Kojiro NAGATA, Kanae HARA, Kosuke TANGE, Masakazu MURASE, Tsubasa HATANAKA, Tomohiko INOMATA, Hideki MASUDA (*Osaka Univ., Nagoya Institute of Technology*)