

----- July 30, 2024 (Monday) 18:10-20:10 Room A -----

- from 18:10 to 19:10 (for presenters given an odd number)
- from 19:10 to 20:10 (for presenters given an even number)

2P-01

***Shinya Moribe**¹, Yasuhiko Takeda¹, Mitsutaro Umehara¹, Jiaju Ma¹, Yuri Yamada¹, Minoru Hirano¹ (1.TOYOTA CENTRAL R&D LABS., INC.)

Transient photocurrent response of porphyrin-zirconium metal-organic framework electrodes in photoelectrochemical reactions

2P-02

***Alexandru George Dumitrascu**¹, Laureline Lecarme¹, Jean-Claude Lepretre¹ (1.Grenoble INP)

Photo-assisted recharge of Lithium Ion Battery

2P-03

***Jigar Shaileshkumar Halpati**¹, Aravind Kumar Chandiran¹ (1.Indian Institute of Technology Madras)

Mixed tetravalent vacancy ordered halide double perovskites for enhanced solar water oxidation.

2P-04

***Wei-Yin Sun**¹ (1.Nanjing University)

Copper frameworks with tetraphenylethene-imidazole ligand for photo/electrocatalytic carbon dioxide reduction

2P-05

***Kazutaka Akiyoshi**¹, Mariko Hasegawa¹, Chie Miyamae¹, Tatsuya Kameyama¹, Hiroki Sato², Yusuke Ohshima², Tsukasa Torimoto¹ (1.Nagoya University, 2.TANAKA KIKINZOKU KOGYO K.K.)

Facile Solution-Phase Synthesis of Ag-Au-S Quantum Dots with Near-Infrared Photoluminescence

2P-06

***Ryusuke Mizoguchi**¹, Behera Truptimayee², Ayumi Ishii² (1.Teikyo University of Science, 2.Waseda University)

Lanthanide-based Up-conversion Hybrid Materials with Multicolor Luminescence

2P-07

***Mir Ferdous Chowdhury**¹, Fumiaki Amano¹ (1.Tokyo Metropolitan University)

Electrochemical self-doping in TiO₂ nanotubes for enhanced photoelectrochemical degradation of organic dye

2P-08

***Mizuki Noto**¹, Ayumi Ishii² (1.Teikyo University of Science, 2.Waseda University)

Quantum-cutting induced near-infrared luminescence in Yb³⁺-doped lead halide perovskite single crystals

2P-09

***Minori Ishihara**¹, Tomoya Oshikiri^{1, 2}, Xu Shi¹, Hiroaki Misawa^{1, 3, 4} (1.Hokkaido University, 2.Tohoku University, 3.Okayama University, 4.National Yang Ming Chiao Tung University)

Hot-electron transfer on photoanode with multilayer gold nanoparticles under strong coupling between plasmon and Fabry-Pérot nanocavity

2P-10

***Ren Itagaki**^{1, 2}, Akinobu Nakada^{1, 3}, Hajime Suzuki¹, Osamu Tomita¹, Ryu Abe¹ (1.Kyoto University, 2.JSPS Research Fellow DC1, 3.PRESTO/JST)

Photoredox Catalysis Harnessing Water as an Electron Source with Phase-Migrating Electron Mediators in a Biphasic Solution

2P-11

***Hirotō Ueki**¹, Shuji Anabuki², Megumi Okazaki¹, Kenta Aihara¹, Fumitaka Ishiwari³, Akinori Saeki³, Akira Yamakata², Kazuhiko Maeda¹ (1.Tokyo Tech., 2.Okayama University, 3.Osaka University)

Improved activity of a particulate Pb-Ti oxyfluoride photocatalyst by particle size reduction

2P-12

***Kei Kamogawa**¹, Yuki Kato², Yuushi Shimoda³, Kiyoshi Miyata³, Ken Onda³, Takumi Noguchi², Yusuke Tamaki⁴, Osamu Ishitani⁵ (1.Tokyo Tech., 2.Nagoya University, 3.Kyushu University, 4.AIST, 5.Hiroshima University)

Improvement of Ru(II)-Re(I) Supramolecular Photocatalysts Based on Mechanistic Study

2P-13

***Riku Nakao**¹, Kotaro Wada¹, Kengo Nagatsuka¹, Yuichi Yamaguchi^{1,2}, Akihiko Kudo^{1,2} (1.Tokyo University of Science, 2.CVRC, RIST TUS)

Development of Z-schematic Photocatalyst Systems for Water Splitting using Long Wavelength Visible Light-Responsive Metal Sulfides Prepared by a Flux Method

2P-14

***Tomoomi Miyashita**¹, Shunya Yoshino¹, Makoto Kobayashi², Hideki Kato (1.Tohoku University 2.Nagoya University)

Modification of Fe₂O₃ photocatalyst for application to Z-scheme water splitting

2P-15

***Shunsuke Kobashi**¹, Yoshinori Okayasu¹, Yuki Nagai¹, Yoichi Kobayashi^{1, 2} (1.Ritsumeikan University, 2.PRESTO JST)

Optical Properties and Photostability of Water-Soluble Europium(III) Complex Nanoparticles

2P-16

***Waka Matsuo**¹, Daisuke Yoshioka¹, Yoshinori Okayasu¹, Yuki Nagai¹, Yoichi Kobayashi^{1, 2} (1.Ritsumeikan University, 2.PRESTO JST)

Photoinduced Ligand Displacement in Zinc Sulfide Nanorods

2P-17

***Sota Tokuoka**¹, Daisuke Yoshioka¹, Yuki Nagai¹, Yoshinori Okayasu¹, Yoichi Kobayashi^{1, 2}
(1.*Ritsumeikan University*, 2.*PRESTO, JST*)

Photoinduced emission color change and ligands dependence of Cadmium Sulfide nanoplatelets under UV irradiation

2P-18

***Tomoya Ota**¹, Shigeru Ikeda¹ (1.*Konan University*)

Calcium titanate co-doped with rhodium, antimony, and magnesium as a visible light responsive photocatalyst for hydrogen evolution

2P-19

***Yuan Zhong**¹, Akira Yamamoto¹, Hisao Yoshida¹ (1.*Kyoto University*)

Nonoxidative coupling of methane on Pd-Bi/KTO photocatalyst

2P-20

***Naoki Hosokawa**^{1, 3}, Yusuke Tamaki², Osamu Ishitani³ (1.*Tokyo Tech.*, 2.*AIST*, 3.*Hiroshima University*)

Factors determining formation quantum yields of photochemical reduced species

2P-21

***Mayu Yuasa**¹, Yohei Kametani¹, Yoshihito Shiota¹, Yu Hoshino¹, Hisashi Shimakoshi¹ (1.*Kyushu University*)

Visible Light-driven Photocatalytic Synthesis of *N*-Formamides Only from Amines and Air

2P-22

***Thomas Douglas Small**¹, Cameron Shearer¹, Gregory Metha¹, Yideng Shen¹ (1.*The University of Adelaide*)

Fabricating visible light active photocatalysts for enhanced hydrogen production

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***Yideng Shen**¹, Thomas D. Small¹, Cameron J. Shearer¹, Gregory F. Metha¹ (1.*University of Adelaide*)

Improving BiVO₄ as OEP for Z-scheme photocatalyst

2P-24

***Hideya Tsuchikado**¹, Yuta Shiroma¹, Dongxiao Fan², Megumi Okazaki¹, Fumitaka Ishiwari³, Shunsuke Nozawa², Akira Yamakata⁴, Akinori Saeki³, Kazuhiko Maeda¹ (1.*Tokyo Tech.*, 2.*High Energy Accelerator Research Organization*, 3.*Osaka University*, 4.*Okayama University*)

Development of Cation-Doped Layered Perovskite Oxynitride K₂LaTa₂O₆N Photocatalyst for Efficient Hydrogen Evolution

2P-25

***Hiroki Iwaizumi**¹, Yasutaka Kitahama¹, Vikas Nandal², Kazuhiko Seki², Toshio Hayashi^{3, 4}, Akihiko Kudo^{5, 6}, Hiroyuki Matsuzaki¹, Kazunari Domen^{7, 8} (1. *Research Institute for Material and Chemical Measurement, AIST*, 2. *Global Zero Emission Research Center, AIST*, 3. *ARPChem*, 4. *Mitsui Chemicals, Incorporated*, 5. *Tokyo University of Science*, 6. *Research Institute of Science & Technology*, 7. *Shinshu University*, 8. *The University of Tokyo*)

Unveiling photogenerated carrier dynamics in visible-light absorbing SnNb₂O₆ by transient absorption spectroscopy

2P-26

***Takuya Yokoo**¹, Eri Sakuda¹, Kenichiro Omoto¹, Yasuhiro Arikawa¹, Keisuke Umakoshi¹ (1. *Nagasaki University*)

Synthesis and Photophysical Properties of Ruthenium (II) Complexes with Planar Boron Ligand

2P-27

***Yuki Tomita**¹, Natsuki Taira¹, Ken Sakai¹, Hironobu Ozawa¹ (1. *Kyushu University*)

Highly Efficient Visible-Light-Driven Water Oxidation by a Carbon Nitride Modified with Cobalt Polyoxometalate Molecular Catalyst

2P-28

***Daehan Lee**¹, Min-Jong Bong¹, Seong Woon Jeong¹, Hyeongu Kang¹, Ho-Jin Son¹ (1. *Korea University*)

Photocatalytic Conversion of CO₂ to Formate/CO by (η^6 -*para*-Cymene)Ru(II) Half-Metallocene Catalyst: Influence of Additives and TiO₂ Immobilization on Catalytic Mechanism and Product Selectivity

2P-29

***Min-Jong Bong**¹, Daehan Lee¹, Sang Heon Jeong¹, Seung-Hwan Cha¹, Myung Jae Lee¹, Ho-Jin Son¹ (1. *Korea University*)

Secondary Sphere Impact on Organometallic Catalysts in Photochemical CO₂ Reduction: Tailoring Product Selectivity through Alcohol and Alkyloxy Tethering Ligands

2P-30

***Airi Yamaguchi**¹, Tadashi Kanbara¹, Tomoko Yajima¹ (1. *Ochanomizu University*)

Utilization of Linear Perfluoroalkyl Aromatics Under Visible-Light

2P-31

***Tam Thi Thanh Tran**¹, Manabu Abe¹ (1. *Hiroshima University*)

Thiophene Units for Near-infrared Two-photon Uncaging of Calcium ions

2P-32

***Fan Zhang**¹, Erik Budi santiko¹, Manabu Abe¹ (1. *Hiroshima University*)

Development of two-photon responsive photocatalysts and their applications

2P-33

***Ryuei Hayashi**¹, Ryoko Oyama¹, Manabu Abe¹ (1. *Hiroshima University*)

Mechanistic study on photo-induced deprotection of indole-type photolabile protecting groups

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***Yugu Takara**¹, Ma-aya Takano¹, Manabu Abe¹ (1.Hiroshima University)

Photochemical generation of 2-aryindenyl cations with triplet ground-states

2P-35

***Shun Tian**¹, Guixiang Li¹, Roland C. Turnell-Ritson¹, Mohammad K. Nazeeruddin¹, Paul J. Dyson¹ (1.EPFL)

Controlling Tin Halide Perovskite Oxidation Dynamics in Solution for Perovskite Optoelectronic Devices

2P-36

***Yuka Yoshihara**¹, Keishi Tada¹, Jotaro Nakazaki¹, Fumiyasu Awai¹, Kazuteru Nonomura¹, Satoshi Uchida¹, Hiroshi Segawa¹ (1.The University of Tokyo)

Effect of In-plane Cell Structure on Photoelectric Conversion Characteristics of Perovskite Solar Cells

2P-37

***Masumi Saito**¹, Satoshi Uchida¹, Kazuteru Nonomura¹, Ajay Kumar Jena¹, Hiroshi Segawa¹ (1.The University of Tokyo)

Origin of capacitance of organic lead halide perovskite solar cells

2P-38

***Andre Sarto Polo**¹, Lucas Polimante Souto¹ (1.Federal University of ABC)

The Role of Mixing Methylammonium and Formamidinium Cations on the Durability of Perovskite Solar Cells

2P-39

***Nideesh Perumbalathodi**¹, Tzu sen Su³, Zi-Fan He¹, Kala Kannankuty¹, Tzu Chien Wei^{1, 2} (1.National Tsing Hua University, 2.National Yang-Ming Chiao Tung University, 3.National Taiwan University of Science and Technology)

Bi-directional Passivation for Highly Efficient and Stable CuSCN-based Perovskite Solar Cell using (3-Mercaptopropyl)trimethoxysilane

2P-40

***Koichi Tamaki**¹, Haibin Wang¹, Naoyuki Shibayama², Ryota Jono^{1, 3}, Takaya Kubo¹, Hiroshi Segawa¹ (1.The University of Tokyo, 2.Toin University of Yokohama, 3.Research Organization for Information Science and Technology)

Photovoltaic Performance and Long-term Stability of Lead Sulfide Quantum Dot Solar Cells Using Dicarboxylic Acid Ligands in the Hole Transport Layer

2P-41

***Koichi Yamashita**¹, Masanori Kaneko¹, Maki Otake², Azusa Muraoka² (1.Yokohama City University, 2.Japan Women's University)

First-Principles Calculations on Optical Properties and Defect Structures of Ge-Doped Sn Perovskites

2P-42

***Tho Ngoc Anh Vo¹** (*1.National Tsing Hua University*)

Advancements in perovskite photovoltaics and the superiority of perovskite solar cells for indoor energy harvesting

2P-43

***Khai Le Viet Vo¹**, Phuong Thi Ha Phuong¹, Tho Ngoc Anh Vo¹, Chien Tzu Wei¹ (*1.National Tsing Hua University*)

An Insight on The Potential of Perovskite/Silicon 4-Terminal Tandem Solar Cell Integration System

2P-44

***Min An Wei¹**, Shafna Kunnathum Peedika¹, Tzu Chein Wei¹ (*1.National Tsing Hua University*)

An eco-friendly way to recycle lead-iodide from perovskite solar cells

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***Itsuki Hanamitsu¹** (*1.Kwansei Gakuin University*)

Spectroscopic study of the artificial LH1 complex created by reconstitution method: Detailed elucidation of excitation energy transfer processes

2P-46

***Hiroshi Isobe¹**, Takayoshi Suzuki¹, Michihiro Suga¹, Jian-Ren Shen¹, Kizashi Yamaguchi² (*1.Okayama University, 2.Osaka University*)

Exploring the Interplay between Collective Motion in the Primary Coordination Sphere and Catalytic Function in the Oxygen-Evolving Complex of Photosystem II

2P-47

***Yoshiki Nakajima¹**, Hajime Fujii¹, Chunxi Zhang^{2,2}, Jian-Ren Shen¹ (*1.Okayama University, 2.Institute of Chemistry, Chinese Academy of Sciences, Beijing*)

X-ray crystallography of photosystem II complex in which calcium of the manganese cluster is replaced by yttrium

2P-48

***Yoichi Matsuzaki¹**, Yoshihiro Nishiyama², Yasutaka Kitagawa², Kazuaki Seki¹, Yasuhiro Shiraishi², Takayuki Hirai² (*1.Nippon Steel Corporation, 2.Osaka University*)

Mechanistic Study on Photosynthetic Reactions of Organic Semiconductors

2P-49

***Maika Inoue¹**, Yu Nabetani¹, Tsutomu Shiragami¹ (*1.University of Miyazaki*)

Photooxidation of water to hydrogen peroxide catalyzed by germanium *N*-confused porphyrin / TiO₂ electrode

2P-50

***Takashi Kawakami**^{1,2}, Mizuki Otsuka², Koichi Miyagawa^{2,3}, Yuta Suzuki², Shusuke Yamanaka², Mitsutaka Okumura², Takahito Nakajima¹, Kizashi Yamaguchi^{1,2} (1.*RIKEN R-CCS*, 2.*Osaka University*, 3.*University of Tsukuba*)

Theoretical calculations of Cubane-type Mn trinuclear complex (YMn₃O₃, DyMn₃O₃) as PSII OEC (CaMn₄O₅) related molecules

2P-51

***Koichi Miyagawa**¹, Mitsuo Shoji², Takashi Kawakami³, Hiroshi Isobe⁴, Kizashi Yamaguchi^{1,3} (1.*Osaka University*, 2.*University of Tsukuba*, 3.*RIKEN*, 4.*Okayama University*.)

Relative stability and electronic structures in the S₁ state of the CaMn₄O₅ cluster of the OEC of the PSII by DFT and CC calculations

2P-52

***Mitsuo Shoji**¹, Takashi Nakazono², Hiroshi Isobe³, Kizashi Yamaguchi⁴, Tohru Wada⁵ (1.*University of Tsukuba*, 2.*Osaka Metropolitan University*, 3.*Okayama University*, 4.*Osaka University*, 5.*Rikkyo University*)

Reaction mechanism of an efficient water oxidation catalyzed by a ruthenium complex with a phenolic group

2P-53

***Hironobu Ozawa**¹ (1.*Kyushu University*)

A Molecular-Based Photoelectrochemical Cell for Highly Efficient Solar Water Splitting

2P-54

***Kizashi Yamaguchi**^{1,4}, Koichi Miyagawa^{2,1}, Mitsuo Shoji², Hiroshi Isobe³, Takashi Kawakami^{1,4}, Takahito Nakajima⁴ (1.*Osaka University*, 2.*University of Tsukuba*, 3.*Okayama University*, 4.*RIKEN*)

Post DFT Computations of Strongly Correlated Electron Systems: 3d Transition-Metal Oxide Clusters for Water Oxidation

2P-55

***Yuki Matsuda**¹, Ryota Nakamura¹, Yoshiki Ozawa¹, Keishiro Tahara¹, Toshikazu Ono², Nobuto Yoshinari³, Takumi Konno³, Kunihisa Sugimoto⁴, Shintaro Kobayashi⁵, Shogo Kawaguchi⁵, Masaaki Abe¹ (1.*University of Hyogo*, 2.*Kyushu University*, 3.*Osaka University*, 4.*Kindai University*, 5.*JASRI*)

Vapor-Induced Structural Transformation Dynamics of Photoluminescent Coordination Network Crystals

2P-56

***Tatsuya Okayama**¹, Minoru Mizuhata¹, Hiro Minamimoto¹ (1.*Kobe University*)

Investigations of Interlayer Structure Effects on Oxygen Evolution Activity in Layered Double Hydroxides Prepared by Liquid Phase Deposition Method

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***SUIL IN**¹ (1.*DGIST*)

Effect of Ti₃⁺/Ti₄⁺ active sites in direct gas-solid-phase CO₂ photoreduction