THE 122ND ICR ANNUAL SYMPOSIUM

(9 December 2022)

ORAL PRESENTATION

TANIFUJI, Kazuki (Organometallic Chemistry)
"Investigations into Biosynthesis of Nitrogenase Cofactor via Semi-Synthetic Approach"

ISOZAKI, Katsuhiro (Synthetic Organotransformation)
"Catalytic Transformations Enabled by Gold Nanoclusters Bearing Supramolecular Reaction Field"

SHIOYA, Nobutaka (Chemistry for Functionalized Surfaces)
"Polymorphism in Organic Semiconductor Thin Films: From Monolayer to Bulk"

IMANISHI, Miki (Biofunctional Design-Chemistry)
"Detection and Manipulation of RNA Modifications"

NAGAO, Kazunori (Synthetic Organic Chemistry)
"A Photoredox/Cobalt/Brønsted Acid Cooperative Catalysis Enabling Hydrofunctionalization of Aliphatic Alkenes"

— ICR Award for Young Scientists —

NARITA, Hideki (Nanospintronics)
"Field-Free Superconducting Diode Effect in Noncentrosymmetric Superconductor/Ferromagnet Multilayers"

YUMOTO, Go (Nanophotonics)
"Rapidly Expanding Spin-Polarized Exciton Halo in a Two-Dimensional Halide Perovskite at Room Temperature"

— ICR Award for Graduate Students —

NAKAGAWA, Kotaro (Nanophotonics)
"Size-Controlled Quantum Dots Reveal the Impact of Intraband Transitions on High-Order Harmonic Generation in Solids"

NGUYEN, Duc Anh (Bio-knowledge Engineering)
"SPARSE: A Sparse Hypergraph Neural Network for Learning Multiple Types of Latent Combinations to Accurately Predict Drug-Drug Interactions"

IWASHIMIZU, Chisaki (Electron Microscopy and Crystal Chemistry)
"Electron Orbital Mapping of $SrTiO_3$ Using Electron Energy-Loss Spectroscopy"

— ICR Grants for Promoting Integrated Research —

TAHARA, Hirokazu (Nanophotonics)
"Study of Cooperative Quantum Optical Properties in Nanocrystal Superlattices"

SEKIGUCHI, Fumiya (Nanophotonics)
"Exploration of Terahertz Nonreciprocal Nonlinear Phenomena in Superconductor Hosting an Artificial Superlattice"

YUMOTO, Go (Nanophotonics)
"Development of Polarization-Resolved Pump-Probe Microscopy and Study of Spatiotemporal Dynamics of Spins in Two-Dimensional Halide Perovskites"

POSTER PRESENTATIONS

LW : Laboratory Whole Presentation
LT : Laboratory Topic
GE : General Presentation

— Organoelement Chemistry —

GE NISHINO, Ryohei; MIZUHATA, Yoshiyuki; TOKITOH Norihiro
"Novel Germanium Transfer Reaction *via* the Germanium Exchange on the Germabenzenyl Ring"

— Structural Organic Chemistry —

LW "Recent Activities in Structural Organic Chemistry Laboratory"

GE ZHANG, Zheng; MURATA, Yasujiro; HIROSE, Takashi
"Synthesis and Circularly Polarized Light Emission Properties of Helicene Derivatives with 1,2,5-thiadiazole Moieties at Both Ends"

— Synthetic Organic Chemistry —

LW "Radicals Open up New Catalysts, Reactions, and Functions"

GE OTA, Kenji; NAGAO, Kazunori; HATA, Dai; MIYAMOTO, Naoya; TOKUNOH, Ryosuke; SASAKI, Yusuke; OHMIYA, Hirohisa
"Synthesis of Alkylphosphonate Oligonucleotides through Light-Driven Radical-Polar Crossover"

— Advanced Inorganic Synthesis —

LW "Introduction of Recent Researches in Advanced Inorganic Synthesis Group"

GE TAKAHATA, Ryo
"Structural Isomerization and Evolution of Au Clusters Induced by Ligand Exchange Reactions"

— Chemistry of Polymer Materials —

LW "Recent Research in Chemistry of Polymer Materials Laboratory"

GE FUJJIMOTO, Seitaro
"Synthesis of Novel Cellulose-Nanocrystal Derivatives Asymmetrically Substituted with Two Types of Graft Polymer"

— Polymer Controlled Synthesis —

LW "Research Activities in Laboratory of Polymer Controlled Synthesis"

GE WU, Jiade; TOSAKA, Masatoshi; YAMAGO, Shigeru
"Controlled Ring-Opening Copolymerization of a Novel Cyclic Carbonate Monomer with an Ortho-Nitrobenzyl Group and Photo-Degradation of the Resulting Copolymers"

— Inorganic Photonics Materials —

LW "Research Introduction of Inorganic Photonics Materials"

— Nanospintronics —

GE KOBAYASHI, Yuta
"Pulse-Width Dependence of Spin-Orbit Torque Switching in Mn_3Sn/Pt Thin Films"

— Biofunctional Design-Chemistry —

LW "Recent Research in the Laboratory of Biofunctional Design-Chemistry"

GE TANAKA, Kamui; IMANISHI Miki; FUTAKI Shiroh
"Screening of FTO Inhibitors and an Effect of L-Ascorbic Acid on FTO Activity"

— Chemistry of Molecular Biocatalysts —

LW "Introduction of Chemistry of Molecular Biocatalysts Lab"

— Molecular Biology —

LW "Research of Molecular Biology Laboratory"

— Chemical Biology —

LW "Create New World of Bioactive Synthetic Molecules"

— Molecular Materials Chemistry —

LW "Molecular Materials Chemistry"

GE KANDA, Syun; KAJI, Hironori
"Thickness-Dependent Charge Mobility Distribution in Organic Amorphous Film"

— Hydrospheric Environment Analytical Chemistry —

LW "Reveal the Ocean by Using Trace Elements and Their Isotopes"

GE IWASE, Misato; ISOBE, Kota; ZHENG, Linjie; TAKANO, Shotaro; SOHRIN, Yoshiki
"Solid-Phase Extraction of Palladium, Platinum, and Gold Using Chelating Adsorbents with Ethylenediamine Groups"

— Chemistry for Functionalized Surfaces —

GE OKA, Takayuki; SHIOYA, Nobutaka; SHIMOAKA, Takafumi; HASEGAWA, Takeshi
"Influence of Alkyl Chain Length on the Polymorphism in Organic Semiconductor Thin Films"

GE SAKO, Nobuaki; SHIMOAKA, Takafumi; SHIMOAKA, Takafumi; HASEGAWA, Takeshi
"Relationship between Molecular Aggregation Structure and Surface Property of Perfluoropolyether-Based Self-Assembled Monolayer"

— Molecular Microbial Science —

LW "Molecular Microbial Science Laboratory"

GE TSUDZUKI, Taiku; IMAI, Tomoya; KAWAMOTO, Jun; OGAWA, Takuya; KURIHARA, Tatsuo
"Function of Sugar-Phosphate Transferase Homologs in the Cargo Protein Transport to Bacterial Extracellular Membrane Vesicles"

— Polymer Materials Science —

GE HARA, Yuta; TAKENAKA, Mikihito; OGAWA, Hiroki; MASHITA, Ryo
"Correlation between Filler Orientation and Void Distribution under Stretching of Filler-Filled Rubber by SAXS-CT"

GE ARAKAWA, Masato; TAKENAKA, Mikihito
"Study on the Change of Density Distribution of LLDPE during Drawing Process"

—Molecular Rheology —

LW "Research Activities in Molecular Rheology Laboratory"

— Molecular Aggregation Analysis —

LW "Research in Molecular Aggregation Analysis"

GE KANEKO, Ryuji; MORISHITA, Taro; MATSUSHIGE, Yuko; TROUNG, Minh Anh; MURDEY, Richard; NAKAMURA, Tomoya; WAKAMIYA, Atsushi
"Controlling Crystal Growth of Perovskite Semiconductors Using Formamidinium Salts for Large-Scalable Process of Perovskite Solar Cells"

— Particle Beam Science —

LW "Particle Beam Science Lab."

LT "Renewal of KAKEN Electron Linac (KEL)"

— Laser Matter Interaction Science —

LW "Introduction of the Laser Matter Interaction Science Laboratory"

— Electron Microscopy and Crystal Chemistry —

LW "Research Activities in Division of Electron Microscopy and Crystal Chemistry"

GE KAZAMA, Hiroki; NEMOTO, Takashi; HARUTA, Mitsutaka; KURATA, Hiroki
"Coupling of Surface Plasmon of Ag Nanorods and Exciton of Organic Materials"

— Atomic and Molecular Structures —

LW “Introduction of Atomic and Molecular Structures Laboratory”

— Synthetic Organotransformation —

GE IMAI, Makiko; NAKAMURA, Yuki; SUZUKI, Shogo; ISOZAKI, Katsuhiro; NAKAMURA, Masaharu; MATSUMURA, Hiroyuki (Daicel); KITAYAMA, Kenji (Daicel)
“Isolation of Novel Cellulose Nanostructures by Mild Degradation Reaction of Woody Biomass”

GE WU, Dongran; MATSUDA, Hiroshi; AVENA, Ramon; AOKI, Satoshi; PINCELLA, Francesca; NAKAMURA, Masaharu
“Synthetic Study of Iron-Catalyzed Monoaminated Biaryl Compounds”

— Advanced Solid State Chemistry —

LW “Research Introduction in Advanced Solid State Chemistry Laboratory”

— Organometallic Chemistry —

LW “Recent Research Topics of Organometallic Chemistry Laboratory”

— Nanophotonics —

LW “Recent Research Topics of Nanophotonics Group”

— Chemical Life Science —

LW “Chemical Life Science”

— Mathematical Bioinformatics —

LT LIU, Chunting
“MSNet-4mC: Learning Effective Multi-Scale Representations for Identifying DNA N4-Methylcytosine Sites”

GE LI, Ruiming; LEE, Jung-Yu; YANG, Jinn-Moon; AKUTSU, Tatsuya
“Densest Subgraph-Based Methods for Protein-Protein Interaction Hot Spot Prediction”

— Bio-knowledge Engineering —

LT NGUYEN, Duc Anh; NGUYEN, Canh Hao; PETSCHNER, Peter; MAMITSUKA, Hiroshi
“Advanced Hypergraph Neural Network Models to Accurately Predict Drug-Drug Interactions”