

THE 120TH ICR ANNUAL SYMPOSIUM

(11 December 2020)

ORAL PRESENTATION

MASHIGUCHI, Kiyoshi (Chemistry of Molecular Biocatalysts)
“Analysis of Strigolactone Biosynthesis and Transport”

YUKIMOTO, Mariko (Organoelement Chemistry)
“Synthesis of Highly Reactive Germanium Compounds Utilizing a TbtCH₂ Group”

MORI, Tomoya (Mathematical Bioinformatics)
“*In Silico* 3D Tissue Reconstruction of Mid-gastrula Mouse Embryo by Self-organizing Map”

AMANO PATINO, Midori Estefani (Advanced Solid State Chemistry)
“Synthesis and Magnetic Property Characterization of the Quadruple Perovskite CaFe₃Ti₄O₁₂”

SATO, Takeshi (Molecular Rheology)
“Development of a Coarse-grained Simulation Model for Predicting Rheology”

— ICR Award for Young Scientists —

SHIOTA, Yoichi (Nanospintronics)
“Tunable Magnon-magnon Coupling Mediated by Dynamic Dipolar Interaction in Synthetic Antiferromagnets”

ZHENG, Linjie (Hydrospheric Environment Analytical Chemistry)
“Distinct Basin-scale-distributions of Aluminum, Manganese, Cobalt, and Lead in the North Pacific Ocean”

NAKAMURA, Tomoya (Molecular Aggregation Analysis)
“Sn(IV)-free Tin Perovskite Films Realized by *in situ* Sn(0) Nanoparticle Treatment of the Precursor Solution”

— ICR Award for Graduate Students —

ISHIBASHI, Mio (Nanospintronics)
“Switchable Giant Nonreciprocal Frequency Shift of Propagating Spin Waves in Synthetic Antiferromagnets”

SANARI, Yasuyuki (Nanophotonics)
“Modifying Angular and Polarization Selection Rules of High-order Harmonics by Controlling Electron Trajectories in k-Space”

— ICR Grants for Promoting Integrated Research —

KAWANO, Kenichi (Biofunctional Design-Chemistry)
“Development of a High-throughput Detection Method for Bacterial Extracellular Membrane Vesicles Using a Curvature-sensing Peptide”

POSTER PRESENTATIONS

LW: Laboratory Whole Presentation

LT: Laboratory Topic

GE: General Presentation

— Organoelement Chemistry —

LW “Studies on the Synthesis and Properties of Novel Organic Compounds Containing Heavier Elements”

— Structural Organic Chemistry —

LW “Research Activities in Structural Organic Chemistry Laboratory”

— Synthetic Organic Chemistry —

LW “Recent Research of Division of Synthetic Chemistry”

GE MORISAKI, Kazuhiro; EMI, Ryota; SATO, Yuki; CHEN, Gong; UJI, Akihito; UEDA, Yoshihiro; KAWABATA, Takeo
“Remote Asymmetric Induction by C(sp²)-H Amination”

— Advanced Inorganic Synthesis —

LT “Current Research Topics in Advanced Inorganic Synthesis”

GE NAKAGAWA, Fumiko; SARUYAMA, Masaki; TERANISHI, Toshiharu
“One-pot Synthesis of Assembly-controlled Nanoparticle Superstructures”

— Chemistry of Polymer Materials —

LW “Research Activities in Laboratory of Polymer Materials Chemistry”

GE SAITO, Masahiro; SAKAKIBARA, Keita; TSUJII, Yoshinobu
“Swelling Characteristics of Concentrated Polymer Brushes Studied by *in-situ* Measurement of Film Thickness on Spinning”

— Polymer Controlled Synthesis —

LW “Introduction of Research in the Field of Polymer Controlled Synthesis”

GE TERABAYASHI, Tomoaki; KAYAHARA, Eiichi; KATO, Tatsuhisa; YAMAGO, Shigeru
“Syntheses and Properties of Mobius and Double-twisted Cycloparaphenylene Derivatives”

GE IMAMURA, Yuji; YAMAGO, Shigeru
“Dual Control of Molecular Weight and Stereoregularity of Polyacrylamides by TERP in the Presense of Lanthanide Lewis Acids”

GE HE, Yuzhong; LU, Yangtian; YAMAGO, Sigeru
“Synthesis and Properties of Amphiphathic Block Copolymers Having Hyperbranched Structures”

GE JIANG, Yuhan; TOSAKA, Masatoshi; TSUJISAKA, Makoto; SOHRIN, Yoshiki; YAMAGO, Shigeru
“A Method for Removal of Organotellurium Group from the Polymers Prepared by *ab-initio* Emulsion Organotellurium-mediated Radical Polymerization”

GE LI, Xiaopei; OGIHARA, Tasuku; NAKAMURA, Yasuyuki; YAMAGO, Shigeru
“Evidence for Polarity- and Viscosity-controlled Domains in the Termination Reaction in the Radical Polymerization of Acrylonitrile”

— Inorganic Photonics Materials —

LW “Research Progress at Inorganic Photonic Lab”

— Nanospintronics —

LW “Recent Progress in Nanospintronics Lab”

GE IKEBUCHI, Tetsuya
“Crystal Orientation Dependence of Spin Hall Angle in Epitaxial Pt/Py Films”

GE HUNG, Yu Min
“Low Current Driven Vertical Domain Wall Motion Memory with Artificial Ferromagnet”

— Biofunctional Design-Chemistry —

LW “Research in the Biofunctional Design-Chemistry Laboratory”

GE SAKAMOTO, Kentarou; AKISHIBA, Misao; IWATA, Takahiro; MICHIBATA, Junya; IDE, Akiko; KAWANO, Kenichi; FUTAKI, Shiroh
“Creation of Endosomolytic Peptide ‘HAad’ and Its Analog with Improved Cytosolic Macromolecule Delivering Activity”

— Chemistry of Molecular Biocatalysts —

LW “Research Activities in Laboratory of Chemistry of Molecular Biocatalysts”

— Molecular Biology —

LW “Research Projects in the Laboratory of Molecular Biology”

— Chemical Biology —

LW “Create New World of Bioactive Synthetic Molecules”

— Molecular Materials Chemistry —

LW “Research Activities in Molecular Materials Chemistry Laboratory”

GE KUSAKABE, Yu
“Conformation Control of Iminodibenzyl-based Thermally Activated Delayed Fluorescence Material by tilted Face-to-Face Alignment with Optimal Distance (tFFO) Design”

GE MORIWAKI, Kazuki
“Multiscale Simulation of Charge Transport in Host-guest-based Emission Layer of Organic Light-emitting Diodes”

— Hydrospheric Environment Analytical Chemistry —

LW “Reveal the Ocean by Using Trace Elements and Their Isotopes”

GE NAGAE, Ayumi; TAKANO, Shotaro; SOHRIN, Yoshiki
“Sectional Distribution of Stable Isotope Ratios for Dissolved Nickel, Copper, and Zinc in the Subarctic North Pacific”

— Chemistry for Functionalized Surfaces —

LW “Study on Two-dimensional Molecular Aggregate Bridging the Molecular Structure and Material Properties”

GE YOSHIDA, Mariko; SHIOYA, Nobutaka; FUJII, Masamichi; SHIMOAKA, Takafumi; HASEGAWA, Takeshi
“Disappearance of Odd-Even Effect of n-Alkanes in a Thin Film”

GE OOTSUKI, Masashi; SHIMOAKA, Takafumi; SHIOYA, Nobutaka; HASEGAWA, Takeshi
“Raman Spectroscopic Analysis of the Surface on a Microcrystal of Perfluoroalkane”

— Molecular Microbial Science —

LW “Microbial Science Laboratory”

GE SUWANAWAT, Nittikarn; KUBOSHIMA, Misaki; KAWAMOTO, Jun; OGAWA, Takuya; KURIHARA, Tatsuo
“Studies on the Lysophosphatidic Acid Acyltransferase Homologs of *Shewanella livingstonensis* Ac10”

— Polymer Materials Science —

LW “An Introduction to Takenaka Lab”

GE MITANI, Kenta; OGAWA, Hiroki; WATANABE, Yuki; NISHIKAWA, Yukihito; MASHITA, Ryo; TAKENAKA, Mikihito
“Visualization of the Distribution of Oriented Nanoparticle Fillers and Voids in Rubber/Filler Under Strain”

GE KUMAGAWA, Daiki; TAKENAKA, Mikihito; WATANABE, Yuki; INOUE, Tadashi
“Structure-property Relationship in Rubber/Filler Systems”

GE ODA, Tappei; TAKENAKA, Mikihito; TERASHIMA, Takaya; HIRAI, Tomoyasu
“Ordered Structures of an Asymmetric Diblock Copolymer”

— **Molecular Aggregation Analysis** —

[LW] “Research Progress in Molecular Aggregation Analysis Laboratory”

— **Particle Beam Science** —

[LW] “Research at Particle-Beam Science Laboratory”

— **Laser Matter Interaction Science** —

[LW] “Research Activities in Laboratory of Laser Matter Science”

[GE] FURUKAWA, Yuki; INOUE, Shunsuke; HASHIDA, Masaki
“Development of a Method to Measure the Depth-directional Distribution of Absorption Coefficient of Metal Surface Irradiated by Ultrashort Laser Pulse”

— **Electron Microscopy and Crystal Chemistry** —

[LW] “Research Activities in Division of Electron Microscopy and Crystal Chemistry”

[GE] IWASHIMIZU, Chisaki; HARUTA, Mitsutaka; KURATA, Hiroki
“Electron Orbital Mapping Using STEM-EELS”

— **Atomic and Molecular Structures** —

[LW] “Introduction of Atomic and Molecular Structures Laboratory”

— **Synthetic Organotransformation** —

[LW] “Introduction of Synthetic Organotransformation Group”

[GE] SHARMA, Akhilesh K.; ISEGAWA, Miho; SUZUKI, Tsuyoshi; HATAKEYAMA, Takuji; MOROKUMA, Keiji; NAKAMURA, Masaharu
“Delineating Mechanism of Iron-catalyzed Amination Reaction Using DFT Method”

— **Advanced Solid State Chemistry** —

[LW] “Research Introduction in Advanced Solid State Chemistry Laboratory”

— **Organometallic Chemistry** —

[LW] “Activity Report: Organometallic Chemistry Laboratory”

[GE] WAKIOKA, Masayuki; YAMASHITA, Natsumi; OZAWA, Fumiyouki
“Stereo-controlled Synthesis and *cis-trans* Isomerization of *cis*-Polythienylenevinylene”

— **Nanophotonics** —

[LW] “Recent Research Topics of Nanophotonics Group”

— **Chemical Life Science** —

[LW] “Introduction of Chemical Life Science”

— **Mathematical Bioinformatics** —

[LT] WANG, Feiqi
“Comparison of Pseudoknotted RNA Secondary Structures by Topological Centroid Identification and Tree Edit Distance”

— **Bio-knowledge Engineering** —

[LT] NGUYEN, Canh Hao; MAMITSUKA, Hiroshi
“Sparse Learning on Hypergraphs”