

THE 108TH ICR ANNUAL SYMPOSIUM

(5 December 2008)

ORAL PRESENTATIONS

IKENOUCHI, Junichi (Supramolecular Biology)
“Elucidation of Molecular Mechanisms which Generate and Maintain Discrete Membrane Domains in Polarized Cells”

AKUTSU, Tatsuya (Biological Information Networks)
“Kernel-based Approaches to Classification and Design of Chemical Compounds”

MIZUHATA, Yoshiyuki (Organoelement Chemistry)
“The Chemistry of ‘Heavy Aromatics’”

MURATA, Yasujiro (Structural Organic Chemistry)
“Synthesis and Properties of Open-Cage Fullerenes and Endohedral Fullerenes”

YOSHIMURA, Tomoyuki, et al. (Synthetic Organic Chemistry)
“Asymmetric Synthesis via Planar Chiral Enolates”

KURATA, Hiroki, et al. (Electron Microscopy and Crystal Chemistry)
“Development of a Scanning Transmission Electron Microscope Equipped with a Nanotip-FEG and Its Application to Local Analysis”

SAITO, Takashi (Advanced Solid State Chemistry)
“Synthesis and Physical Properties of the A-site-ordered Perovskites $AA_3B_4O_{12}$ ”




TAKITA, Ryo (Organotransition Metal Chemistry)
“Synthesis and Properties of All-cis Poly(arylene vinylene)s Containing Thiophene Cores”

– ICR Award for Young Scientists –
GOTO, Atsushi (Chemistry of Polymer Materials)
“Reversible Chain Transfer Catalyzed Polymerization(RTCP): A New Class of Living Radical Polymerization”


– ICR Award for Graduate Students –
HARUTA, Mitsutaka (Electron Microscopy and Crystal Chemistry)
“Atomic Resolution ADF-STEM Imaging of Organic Molecular Crystal of Halogenated Copper Phthalocyanine”


MATSUNAGA, Ryusuke (Photonic Elements Science)
“Evidence for Dark Excitons in a Single Carbon Nanotube due to the Aharonov-Bohm Effect”


POSTER PRESENTATIONS


 : Laboratory Whole Presentation
 : Laboratory Topic
 : General Presentation


— Organoelement Chemistry —

 “Synthesis and Properties of Novel Organic Compounds Containing Heavier Elements”

 TSURUSAKI, Akihiro; SASAMORI, Takahiro; TOKITOH, Norihiro
“Cycloaddition Reactions of an Overcrowded 9-Anthryldi-phosphene”


 MATSUMOTO, Teruyuki; SASAMORI, Takahiro; TOKITOH, Norihiro
“Design and Syntheses of a Novel Iminophosphido Ligand and Its Complexation Reactions”

 INAMURA, Koji; MIZUHATA, Yoshiyuki; TOKITOH, Norihiro
“Structures and Reactivity of 9-Sila- and 9-Germaphenanthrene Complexes”


 TANABE, Yusuke; MIZUHATA, Yoshiyuki; TOKITOH, Norihiro
“Elucidation of the Hydration Mechanism of Silabenzene-Cr(CO)₃ Complex and the Chemistry of Related Compounds”


— Structural Organic Chemistry —

 “Synthesis of Endohedral Fullerenes by Means of Organic Synthesis and Their Properties”


 KUROTOBI, Kei; MURATA, Michihisa; MURATA, Yasujiro
“Synthesis and Properties of Open-Cage Fullerene with Expanded π -Conjugated System”

— Synthetic Organic Chemistry —

 HAYASHI, Kazuhiro; CHANGSHENG, Jiang; YOSHIMURA, Tomoyuki; TSUBAKI, Kazunori; SASAMORI, Takahiro; TOKITOH, Norihiro; KAWABATA, Takeo
“Synthesis and Properties of Novel Axially Chiral Binaphthyls Consisting of N-H-N Hydrogen Bond”

 WATANABE, Toshihide; KAWABATA, Takeo
“Asymmetric Aldol Reactions via Memory of Chirality”

— Chemistry of Polymer Materials —

 KYO, Shogyo; KAYAMA, Yuzo; ARITA, Toshihiko; OHNO, Kohji; FUKUDA, Takeshi; TSUJII, Yoshinobu
“Synthesis of Thick, Concentrated Polymer Brushes by High-pressure LRP”

GE AKASHI, Tatsuki; OHNO, Kohji; FUKUDA, Takeshi; TSUJII, Yoshinobu
“Surface-Initiated Atom Transfer Radical Polymerization on Narrowly Size-Distributed Silica Nanoparticles of Diameters less than 100 nm”

— Polymer Controlled Synthesis —

GE UKAI, Yu; MATSUMOTO, Atsushi; NAKAMURA, Yasuyuki; YAMAGO, Shigeru
“Photo Induced Living Radical Polymerization Using Organotellurium Compounds”

GE YAMADA, Hiroto; KAYAHARA, Eiichi; YAMAGO, Shigeru
“Synthesis of End-Functionalized Polymers through Heavier Heteroatom-Metal Exchange Reactions”

GE UEKI, Kazuya; YAMAGO, Shigeru
“Synthesis of Oligo(Aromatic Ketone)s by Iterative Friedel-Crafts Reaction”

— Inorganic Photonics Materials —

LT OKU, Satoshi; TOKUDA, Yomei; TAKAHASHI, Masahide; YOKO, Toshinobu
“Novel Solvent-free Synthesis of Proton-conducting Organic-inorganic Hybrid Materials”

LT OKA, Takanori; TOKUDA, Youmei; TAKAHASHI, Masahide; YOKO, Toshinobu
“Quantitative Analysis for Quadrupolar Nuclei in Amorphous Materials”

LT MIYAGAWA, Yuya; TAKAHASHI, Masahide; TOKUDA, Youmei; YOKO, Toshinobu
“Organo-silico-phosphate Photosensitive Film for Active Microoptics”

— Nanospintronics —

GE NAKANO, Kunihiko; NAKATANI, Yoshinobu; OSHIMA, Norikazu; KASAI, Shinya; KOBAYASHI, Kensuke; ONO, Teruo
“Real-time Detection of the Current Induced Vortex Dynamics by using the TMR Effect”

GE YAMAUCHI, Yoshiaki; HASHISAKA, Masayuki; NAKAMURA, Shuji; KASAI, Shinya; KOBAYASHI, Kensuke; ONO, Teruo
“Measurement of the Shot Noise in a Quantum Dot”

— Biofunctional Design-Chemistry —

LW “Progress in Biofunctional Design Chemistry”

GE NAKAMURA, Atsushi; IMANISHI, Miki; FUTAKI, Shiroh
“Control of a Circadian Clock Gene by Artificial Zinc-finger Type Transcription Factors”

— Chemistry of Molecular Biocatalysts —

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

GE IKEUCHI, Hideyuki
“Inhibitors of Asparagine Synthetase -Molecular Design and Synthesis-”

— Molecular Biology —

LT TANIGUCHI, Y. Yukimi; TSUGE, Tomohiko; AOYAMA, Takashi
“Role of the Arabidopsis Phospholipase D Gene PLD ζ 2 under Phosphate-starved Conditions”

— Chemical Biology —

LW Chemical Biology

GE YAMAZOE, Sayumi; SHIMOGAWA, Hiroki; SATO, Shin-ichi; UESUGI, Motonari
“Discovery of Adhesamine, a Dumbbell-shaped Small Molecule that Promotes Cell Adhesion”

— Molecular Materials Chemistry —

GE SHIMAHARA, Yurie; KIMURA, Hironobu; FUKUSHIMA, Tatsuya; OYAMADA, Takahito; ENDO, Ayataka; YAHIRO, Masayuki; ADACHI, Chihaya; KAJI, Hironori
“Effect of Dynamics on Photoluminescence of Tetraphenylpyrene (TPPy), a Material for Organic Light-Emitting FETs”

GE FUKUSHIMA, Tatsuya; TAKAMI, Kousuke; KAJI, Hironori
“Organic Light Emitting Diodes Fabricated from Alq₃ in Different Crystalline Polymorphs”

GE TAKAMI, Kosuke; YAMADA, Tomonori; KAJI, Hironori
“Crystal Structure Analysis of *N,N*-diphenyl-*N,N*-di(*m*-tolyl) benzidine (TPD) by Two-Dimensional Double-Quantum Solid-State NMR”

GE YAMADA, Tomonori; KAJI, Hironori
“Percolation Paths for Charge Transports in TPD, a Hole-transport Material for Organic Light-emitting Diodes”

— Hydrospheric Environment Analytical Chemistry —

LW “Recent Topics from Hydrospheric Environment Analytical Chemistry”

GE OKABE, Taro; TANIGAWA, Masahito; UMETANI, Shigeo; SOHRIN, Yoshiki
“Ion Imprinted Sol-gel Materials for the Separation of Metal Ions”

— Solution and Interface Chemistry —

LT SHINTANI, Megumi; MATUBAYASI, Nobuyuki; NAKAHARA, Masaru
“NMR Analysis of the Delivered Drugs in the Phospholipid Bilayer Membrane”

GE KIMURA, Hiroshi; MATUBAYASI, Nobuyuki; NAKAHARA, Masaru
“NMR Analysis of Pyrolytic Behaviors of Saccharides”

— **Molecular Microbial Science** —

- LT OMORI, Taketo; HONDA, Ai; MIHARA, Hisaaki; KURIHARA, Tatsuo; ESAKI, Nobuyoshi
“Novel Biological Phospholipids”
- GE MOWAFY, Amr; KURIHARA, Tatsuo; MIHARA, Hisaaki; ESAKI, Nobuyoshi
“2-Haloacrylate Dehalogenase, a Novel Enzyme Representing a New Class of Hydratases”

— **Polymer Materials Science** —

- LW “Recent Research for Polymer Materials Science Laboratory”
- GE TANAKA, Kentaro; NISHIDA, Koji; KANAYA, Toshiji
“Critical Dissolution Ionic Strength of Aqueous Solution of Chitosan”

— **Molecular Rheology** —

- GE CHEN, Quan
“Component Dynamics in Polyisoprene/Poly(4-tert-butylstyrene) Miscible Blends”
- GE MISHIMA, Eri; YAMADA, Takeshi; YAMAGO, Shigeru; WATANABE, Hiroshi
“Development of Living Cationic Polymerization using Organotellurium Compounds”
- GE TANAKA, Satoshi
“Dynamics of Star-block Copolymer during Elasticity Recovery after Cessation of Flow”
- GE SUZUKI, Takeshi
“SCF Calculation of Conformation of Polymer Chain for Multiblock Copolymers”

— **Molecular Aggregation Analysis** —

- LT YOSHIDA, Hiroyuki; WATAZU, Yuji; MURDEY, Richard; SATO, Naoki
“Structure and Molecular Orientation in Vacuum-Deposited Thin Film of Bis(benzo)pentathienoacene”
- GE HIRAMATSU, Takaaki; YOSHIDA, Hiroyuki; SATO, Naoki
“Structural Features of Polymorphic Crystalline Transition of an Amphoteric and Polar Molecule: BMDCM”
- GE UCHINO, Yosuke; YOSHIDA, Hiroyuki; MURDEY, Richard; SATO, Naoki
“Frontier Electronic Structure in an Evaporated Thin Film of Bis(catecholate)diboron”

— **Supramolecular Biology** —

- LT KUBO, Akira
“Identification and Functional Analysis of Lipids Constituting Cell-surface Membrane”
- LT SUZUKI, Harumitsu; KATO, Utako; UMEDA, Masato
“A Role for Fatty Acid Desaturase in Energy Metabolism”

— **Particle Beam Science** —

- GE YAMADA, Masako
“Development of Permanent Magnet Sextupole for Pulsed Cold Neutron Beam”
- GE NAKAO, Masao; SOUDA, Hikaru; WAKITA, Akihisa; TONGU, Hiromu; NODA, Akira; TANABE, Mikio; ISHIKAWA, Takehiro; IKEGAMI, Masahiro; SHIRAI, Toshiyuki
“Two Dimensional Laser Cooling at S-LSR”

— **Laser Matter Interaction Science** —

- LW “Advances in Laser Matter Interaction Science”
- GE NAMBA, Shin; HASHIDA, Masaki; OKAMURO, Kiminori; TOKITA, Shigeaki; SAKABE, Shuji
“Mechanism of Nano-ablation for Metals with Femtosecond Laser”
- GE MASUNO, Shin-ichiro; TOKITA, Shigeaki; HASHIDA, Masaki; SAKABE, Shuji
“Formation of Isolated Minute Thin Films by Laser Induced forward Transfer”

— **Structural Molecular Biology** —

- GE ITO, Yoshiaki; TOCHIO, Tatsunori; HANDA, Katsumi; OOHASHI, Hirofumi; FUKUSHIMA, Sei; BLAICU, Aurel; TERASAWA, Mititaka
“Chemical States Obtained using a High-resolution Double-crystal X-ray Fluorescence Spectrometer”
- LW “Recent Research Topics in Laboratory of Structural Molecular Biology”
- GE ITO, Yoshiaki; SHIGEOKA, Nobuyuki; TOCHIO, Tatsunori; OOHASHI, Hirofumi; YOSHIKAWA, Hideki; FUKUSHIMA, Sei
“Evaluation of the Absorption Edge from the Evolution Spectra”

— **Organic Main Group Chemistry** —

- LW “Recent Research Topics from Organic Main Group Chemistry”
- GE NAKAGAWA, Naohisa; HATAKEYAMA, Takuji; NAKAMURA, Masaharu
“Iron-Catalyzed Cross-Coupling Reaction between Alkenyl-zinc Reagents and Alkyl Halides”
- GE TAKAYA, Hikaru; ISOZAKI, Katsuhiro; HAGA, Yusuke; FUKUI, Sadayuki; SASANO, Daisuke; SEIKE, Hirofumi; NAOTA, Takeshi; NAKAMURA, Masaharu
“Metallated Peptides: Synthesis, Structure, and Functions”
- GE YOSHIMOTO, Yuya; HATAKEYAMA, Takuji; NAKAMURA, Masaharu
“Iron-Catalyzed Enyne Cross-Coupling Reaction”
- GE ITOH, Takuma; ITO, Shingo; NAKAMURA, Eiichi; NAKAMURA, Masaharu
“Iron-Catalyzed Enantioselective Carbometalation of Oxabicyclic Alkenes with Aryl Zinc Reagents”

— **Advanced Solid State Chemistry** —

- LT** SAITO, Takashi
“Magnetism of the A-site-ordered Perovskite $\text{CaCu}_3(\text{Ge}, \text{Ti}, \text{Sn})_4\text{O}_{12}$ ”
- LW** “Recent Research Topics of Laboratory of Advanced Solid State Chemistry”
- GE** INOUE, Satoru; KAWAI, Masanori; SHIMAKAWA, Yuichi
“Epitaxial Thin Films of SrFeO_2 with FeO_2 Infinite Layers by CaH_2 Low Temperature Reduction”
- GE** LONG, Youwen
“High Pressure Synthesis and Intermetallic Charge Transfer in $\text{LaCu}_3\text{Fe}_4\text{O}_{12}$ Double Perovskite”

— **Organotransition Metal Chemistry** —

- LW** “Activity Report: Organotransition Metal Chemistry Laboratory”
- GE** NAKAJIMA, Yumiko; OZAWA, Fumiyuki
“Synthesis and Property of Transition Metal Complexes Bearing a Phosphaalkene Ligand”

— **Bioknowledge Systems** —

- LW** “KEGG Database and GenomeNet Pharmaceutical Products Database”

— **Biological Information Networks** —

- GE** POOLSAP, Unyanee
“Prediction of RNA Secondary Structure with Pseudoknots Using Integer Programming”

— **Pathway Engineering** —

- LT** HASHIMOTO, Kosuke; TAKIGAWA, Ichigaku
“Efficiently Finding Significant Substructural Patterns Conserved in Glycans”

— **Research Center for Low Temperature and Materials Sciences** —

- LT** TERASHIMA, Takahito; NII, Akinori; SHISHIDO, Hiroaki; YASU, Kazuki; KATO, Tomonari; SHIBAUCHI, Takasada; MATSUDA, Yuji
“Preparation and Transport Properties of Heavy-Fermion Superlattices”