



**T**HE 103RD  
ICR ANNUAL  
SYMPOSIUM

**S**EMINARS

**M**EETINGS AND  
SYMPOSIUMS



# THE 103RD ICR ANNUAL SYMPOSIUM

(5 December 2003)

## ORAL PRESENTATIONS

MATUBAYASI, Nobuyuki (Interface Science I)  
“Properties and Reactions of Supercritical Water”

TOSAKA, Masatoshi (States and Structures III)  
“New Aspects in Strain-induced Crystallization of Natural Rubber”

KANAYA, Toshiji (Fundamental Material Properties II)  
“Detailed Analysis and Control of Higher Order Structure in Polymer Systems”

SHIMAKAWA, Yuichi (Solid State Chemistry II)  
“Functional Oxides: Materials for Magnetic Read Heads and Thermal Radiation Control Devices”

- The ICR Award for Young Scientists -

MURATA, Yasujiro (Organic Materials Chemistry II)  
“Synthesis of Open-Cage Fullerene Derivatives and 100% Encapsulation of a Hydrogen Molecule”

- The ICR Award for Young Scientists -

OHASHI, Yohei (Molecular Biology and Information II)  
“Functional Analysis of the *Arabidopsis GLABRA2* Gene That Contributes Root-hair Development through the Modulation of Phospholipid Signaling”

SASAMORI, Takahiro (Bioorganic Chemistry I)  
“Studies on Synthesis, Structures, and Properties of Doubly Bonded Systems between Heavier Group 15 Elements”

KATAYAMA, Hiroyuki (International Research Center for Elements Science III)  
“Well-Controlled Polymer Synthesis by Transition Metal-Catalyzed Polymerization: Ring-Opening Metathesis Polymerization Using Fischer-type Carbene Catalysts”


KAWABATA, Takeo (Synthetic Organic Chemistry II)  
“Asymmetric Alkylation via Memory of Chirality: Mechanism and Its Application to Asymmetric Cyclization”


SAKABE, Shuji (Nuclear Science Research Facility II)  
“Ultra-intense Laser Matter Interactions and Their Applications”

UMEDA, Masato (Molecular Biology and Information I)  
“Approach to Supramolecular Biology”

## POSTER PRESENTATIONS

 : Laboratory Whole Presentation

 : Laboratory Topic

 : General Presentation

- The ICR Award for Students -

ISHIWATA, Shintaro (International Research Center for Elements Science II)

“High Pressure Synthesis and Crystal Structure of Perovskite BiNiO<sub>3</sub>, and Suppression of A-site Charge Disproportionation by La-substitution”


- The ICR Award for Students -

YAMANISHI, Yoshihiro (Bioinformatics Center I)

“Extraction of Correlated Gene Clusters from Multiple Genomic Data by Generalized Kernel Canonical Correlation Analysis”

## STATES AND STRUCTURES I

 “Elucidation of Structure-Function Relationship of Protein Molecule by X-ray Crystallographic Analysis”


 NAKAMATSU, Hirohide; YAMASHITA, Daisuke (Science and Engineering, Waseda University); UDA, Masayuki (Science and Engineering, Waseda University)  
“X-ray Emission Spectra for Fe compounds”


## STATES AND STRUCTURES II


 “Recent Studies in the Division of States and Structures II”

 MINARI, Takeo  
“Electrical Property and Carrier Transport Process in Single Grain Organic Field Effect Transistor”

## STATES AND STRUCTURES III

 SENOO, Kazunobu; ATSUMI, Kunihiro; MURAKAMI, Syozo; KOHJIYA, Shinzo  
“Ion Conductivity of Uniaxially Stretched High Molecular Weight Poly(ethylene oxide)s”

 YOSHIOKA, Taiyo; TSUJI, Masaki; KOHJIYA, Shinzo  
“Morphological Study on Uniaxially Oriented Thin Films of Poly(butylene terephthalate) [PBT]”

 FURUTANI, Masahiro; TOSAKA, Masatoshi; KOHJIYA, Shinzo  
“Effect of Fatty Acids on Strain-induced Crystallization of Natural Rubber”

## INTERFACE SCIENCE I

 “Properties and Reactions of Supercritical Water”

 KIMURA, Tomohiro; OKAMURA, Emiko; MATUBAYASI, Nobuyuki; NAKAHARA, Masaru

“NMR Study on the Interactions of Neuropeptides Achatin-I and Met-Enkephalin with Lipid Bilayers”

## INTERFACE SCIENCE II

LT YOSHIDA, Hiroyuki  
“Thin Film Formation by Use of Cluster Beam”

CE ASAMI, Koji  
“Ion Channels Formed in Lipid Bilayers by Alamethicin and Its Analogues”

## INTERFACE SCIENCE III

LW “Behaviors of Dissolved Metals in Hydrothermal Plumes and Diffused Flows at the Suiyo Seamount, Izu-Bonin arc”

## SOLID STATE CHEMISTRY I

LT MIYAKE, Kousaku  
“Magnetic Structures and Magnetoresistance between Magnetic Wires”

CE OHKOCHI, Takuo  
“Spin Polarization in Nonmagnetic Layers of Magnetic/Nonmagnetic Multilayers”

CE JIKO, Norihiro  
“Magnetism of Cr-based Multilayers”

## SOLID STATE CHEMISTRY IV

LW “Recent Studies in Division of Solid State Chemistry IV”

CE YAMAMOTO, Satomi; TAKAHASHI, Masahide; TOKUDA, Yomei; YOKO, Toshinobu  
“Improvement of Water Durability of Organic-inorganic Hybrid Low-melting Glasses Prepared by Non-aqueous Acid-base”

CE ENKHTUVISHIN, Dorjpalam; TAKAHASHI, Masahide; YOKO, Toshinobu  
“Preparation and Photoelectrochemical Properties of the Sandwich-type Multilayer  $\text{TiO}_2 / \text{MeO}_x / \text{TiO}_2$  Thin Film Electrodes”

CE SAITO, Masanori; TOKUDA, Yomei; TAKAHASHI, Masahide; YOKO, Toshinobu  
“Local Laser Processing of Organic-inorganic Hybrid Low-Melting Glasses Prepared by Non-aqueous Acid-base Reaction”

CE MASAI, Hirokazu; TAKAHASHI, Masahide; TOKUDA, Yomei; YOKO, Toshinobu; WATANABE, Hiroshi (Fundamental Material Properties I)  
“Softening Behavior and Structure of Phenyl/alkylpolysiloxane Glasses”

CE MIZUNO, Megumi; TAKAHASHI, Masahide; TOKUDA, Yomei; YOKO, Toshinobu  
“Preparation and Application of Organic-inorganic Hybrid Low-melting Glasses by Non-aqueous Acid-base Reaction”

CE TAKAHASHI, Masahide; TOKUDA, Yomei; YOKO, Toshinobu  
“Photoactivated Chemical Reactions and Photorefractivity in Ge-doped  $\text{SiO}_2$  Glasses”

CE TOKUDA, Yomei; TAKAHASHI, Masahide; YOKO, Toshinobu  
“Time-resolved Photoluminescence Spectra of Ge: $\text{SiO}_2$  Glasses”

CE ZHANG, Jian; TAKAHASHI, Masahide; TOKUDA, Yomei; YOKO, Toshinobu  
“Photoluminescence Characteristics of  $\text{Eu}^{2+}$  Doped  $\text{CaS-Ca}_2\text{S}_3$  Glass-ceramic Phosphors”

## FUNDAMENTAL MATERIAL PROPERTIES I

LW “Perspective on Molecular Rheology”

CE KIKUCHI, Toshimitsu  
“Electric Birefringence of Amorphous Polymers”

## FUNDAMENTAL MATERIAL PROPERTIES II

LW “Detailed Structural Analysis and Development of Polymer Materials”

CE YAMANO, Hiroaki; INOUE, Rintaro; MIYAZAKI, Tsukasa; NISHIDA, Koji; KANAYA, Toshiji  
“Glass Transition of Polymer Thin Films”

CE KONISHI, Takashi; MATSUBA, Go; NISHIDA, Koji; KANAYA, Toshiji  
“Preparatory Mechanism of Polymer Crystallization”

## FUNDAMENTAL MATERIAL PROPERTIES III

LT KAJI, Hironori; KUSAKA, Yasunari; ONOYAMA, Goro; TSUKAMOTO, Naoki; YAMADA, Tomonori; HORII, Fumitaka  
“Precise Analyses of Structure and Dynamics in Functional Materials by Solid-State NMR Spectroscopy”

CE HIRAI, Asako; HORII, Fumitaka; TSUJII, Yoshinobu (Organic Materials Chemistry I); TSUJI, Masaki (States and Structures III)  
“AFM Observation of Cellulose Assemblies Produced by *Acetobacter Xylinum*”

## ORGANIC MATERIALS CHEMISTRY I

LT OHNO, Kohji  
“Precision Design and Application of Organic/Inorganic Hybrid Nanoparticles”

CE KWAK, Yungwan; GOTO, Atsushi; FUKUDA, Takeshi  
“Kinetic Studies on Organotelluride-Mediated Living Radical Polymerization”

CE YAMANE, Chika  
“Controlled Synthesis of High-Density Polyelectrolyte Brushes by Living Radical Polymerization”

## ORGANIC MATERIALS CHEMISTRY II

- [LT] MURATA, Yasujiro; MURATA, Michihisa; KOMATSU, Koichi  
"Synthesis of Open-Cage Fullerene Derivatives and 100% Encapsulation of a Hydrogen Molecule"
- [GE] UTO, Takayuki; NISHINAGA, Tohru; KOMATSU, Koichi  
"Reactivity of Benzene and COT Fully Annelated with Bicyclo[2.1.1]hexene"
- [GE] YAMAZAKI, Tetsuya; HAN, Aihong; Lin, Jing-Rong; MURATA, Yasujiro; KOMATSU, Koichi  
"Synthesis and Polymerization of the Propylenedioxy-Substituted Terthiophene-Fullerene Dyads"
- [GE] OGAWA, Kohei; KITAGAWA, Toshikazu; KOMATSU, Koichi  
"Synthesis and Properties of Azobis(Malachite Green) Dication"

## SYNTHETIC ORGANIC CHEMISTRY II

- [GE] KUSUMOTO, Tomokazu  
"Visual Recognition using Phenolphthalein Derivatives"
- [GE] TANAKA, Hiroyuki  
"Synthesis and Properties of Optically Active Oligonaphthalene Derivatives"
- [GE] SCHEDEL, Hartmut  
"Synthesis and Properties of C<sub>2</sub>-Symmetric Chiral Nucleophilic Catalysts"

## BIOORGANIC CHEMISTRY I

- [LW] "Synthesis of Novel Organic Compounds Containing Heavier Elements by Taking Advantage of Kinetic Stabilization and the Elucidation of Their Properties"
- [GE] YAMAZAKI, Takayuki; SASAMORI, Takahiro; TAKEDA, Nobuhiro; TOKITOH, Norihiro  
"Studies on the Synthesis of Novel Heteronuclear Double-bond Compounds between Heavier Group 15 Elements Utilizing Steric Protection"
- [GE] HAMAKI, Hirofumi; TAKEDA, Nobuhiro; TOKITOH, Norihiro  
"Synthesis of a Novel Bulky Lithium  $\beta$ -Diketimate Bearing Bulky Substituents and Their Applications to the Synthesis of Complexes of a Group 4 Element"

## BIOORGANIC CHEMISTRY II

- [LW] "Studies of Artificial Zinc Finger Peptides and Membrane-permeable Peptides"
- [GE] NIWA, Miki  
"Intracellular Delivery of Histidine-tagged Proteins Using Arginine-peptides"

## BIOORGANIC CHEMISTRY III

- [GE] IIDA, Shinya  
"Development of a Highly Sensitive Method for Minute Amounts of Nucleic Acids"

- [GE] TAKEHASHI, Masanori  
"Functional Characterization of Septin 3"

## MOLECULAR BIOFUNCTION I

- [LT] SAITO, Shigeki; MIZUTANI, Masaharu; SAKATA, Kanzo  
"Characterization of Cytochromes P450 Involved in ABA Catabolism"
- [LT] KATO, Masahiro; UNO Tetsuya; HIRATAKE, Jun; SAKATA, Kanzo  
"Synthesis and Inhibitory Activities of  $\beta$ -Glycosylamidines as  $\beta$ -Glycosidase Inhibitors"

## MOLECULAR BIOFUNCTION II

- [GE] KWAK, Mi-Sun; MIHARA, Hisaaki; KURIHARA, Tatsuo; YOSHIMURA, Tohru; ESAKI, Nobuyoshi  
"Studies of tRNA-modifying Enzymes"
- [LT] MIHARA, Hisaaki; KURIHARA, Tatsuo; IGARASHI, Motoki; YAMANE, Masahiro; ANO, Kenji; KAZUOKA, Takayuki; YOSHIMURA, Tohru; ESAKI, Nobuyoshi  
"Studies of Biosynthesis of Iron-Sulfur Clusters"

## MOLECULAR BIOLOGY AND INFORMATION I

- [GE] TAKEUCHI, Ken-ichi  
"A *Drosophila* Cryophilic Mutant, *atsugari*"
- [GE] KATO, Utako  
"Membrane Lipid Dynamics; Its Role in Cell Morphogenesis"

## MOLECULAR BIOLOGY AND INFORMATION II

- [LT] OHASHI, Yohei; OKA, Atsuhiko; AOYAMA, Takashi  
"Functional Analysis of an *Arabidopsis* Homeobox Gene, *GL2*."

## INTERNATIONAL RESEARCH CENTER FOR ELEMENTS SCIENCE I

- [LT] TAMAO, Kohei; TSUJI, Hayato; SAEKI, Tomoyuki  
"International Research Center for Elements Science (Organic Main Group Chemistry): Recent Topics in 2003"
- [GE] TSUJI, Hayato; SHIBANO, Yuki; TAMAO, Kohei  
"Conformation Dependence of the Photophysics of 1,2-Diaryldisilane  $\sigma$ - $\pi$  Conjugation System"

- [GE] SAEKI, Tomoyuki; Son, Eun-Cheol; MATSUNAGA, Tadafumi; TAMAO, Kohei  
"Palladium Catalyzed Cross-Coupling Reaction of 1-Aryltriazines with Areneboronic Acids and Aryltrifluorosilanes"

## INTERNATIONAL RESEARCH CENTER FOR ELEMENTS SCIENCE II

- [LT] TAKANO, Mikio; TERASHIMA, Takahito; AZUMA, Masaki  
"International Research Center for Elements Science (Advanced Solid State Chemistry): Recent Topics in 2003"

☒ YAMAMOTO, Shinpei; TAKANO, Mikio  
“Nanocomposite Magnets Prepared by Core-shell Nanoparticles”

☒ BELIK, Alexei A.; AZUMA, Masaki; TAKANO, Mikio  
“Low-dimensional Magnets among Cu-containing Phosphates and Vanadates”

☒ KAN, Daisuke; TERASHIMA, Takahito; TAKANO, Mikio; YAMANAKA, Akio (Chitose Institute of Science and Technology)  
“Preparation and Optical Properties of Single-Crystalline CaCuO<sub>2</sub> Thin Film”

☒ ISHIWATA, Shintaro  
“High Pressure Synthesis, Structure Analysis and La-substitution Effect of a Novel Perovskite BiNiO<sub>3</sub>”

#### BIOINFORMATICS CENTER I

☒ “The Ortholog Clustering (KEGG/OC) using KEGG/SSDB”

☒ YAMANISHI, Yoshihiro  
“Correlation Analysis of Multiple Types of Genomic Data”

#### BIOINFORMATICS CENTER II

☒ UEDA, Nobuhisa  
“Algorithms for Classifying Proteins from Sequences and Inferring Protein-protein Interactions”

#### BIOINFORMATICS CENTER

##### Contributed Chair

##### - Proteome Informatics (SGI Japan) -

☒ AOKI, Kiyoko F.; YAMAGUCHI, Atsuko  
“Algorithms and Statistical Analysis of Structural and Functional Properties of Carbohydrate Chains”

#### BIOINFORMATICS CENTER

##### - Bioinformatics Training Unit -

☒ DAIYASU, Hiromi; KUMA, Keiichi; TOH, Hiroyuki  
“Expansion of the New Photolyase / Cryptochrome Subfamily, DASH”

#### NUCLEAR SCIENCE RESEARCH FACILITY I

☒ TANABE, Mikio; SHIRAI, Toshiyuki; IKEGAMI, Masahiro; TONGU, Hiromu; NODA, Akira  
“Design of Deflection Electrodes in the Bending Magnet for Zero Dispersion”

☒ TONGU, Hiromu  
“Design of S-LSR Vacuum System”

☒ TAKEUCHI, Takeshi  
“Magnetic Field Measurement of S-LSR Quadrupole Magnets”

#### NUCLEAR SCIENCE RESEARCH FACILITY II

☒ HASHIDA, Masaki; SAKABE, Shuji  
“Intense Short Pulse Laser Ablation of Metals: Formation of Nanostructure”

# SEMINARS

Prof AJAYAGHOSH, Ayyappanpillai  
Regional Research Laboratory (CSIR), India  
“ $\pi$ -Extended Squaraines as Intrinsic Conductors and Cation Sensors”  
17 September 2003

Mr ALIOTO, Tyler  
Department of Molecular and Cell Biology, University of California, Berkeley, USA  
“Characterization of the Odorant Receptor C Family in Zebrafish”  
2 June 2003

Prof BARTHEL, Josef  
University of Regensburg, Germany  
“The Role of Ion Aggregation in Physical Properties of Electrolytes Solutions”  
16 October 2003

Prof BÄUERLE, Peter  
Department Organic Chemistry II, University of Ulm, Germany  
“Combinatorial Organic Materials Research (COMR): A Faster Route to Organic Materials”  
10 November 2003

Prof BROCHARD-WYART, Françoise  
University P et M Curie, France  
“Hydroplaning of Cars”  
2 June 2003

Prof BULANOV, Sergei V.  
Kansai Research Establishment, JAERI, Kyoto, Japan / Institute of General Physics, Russian Academy of Sciences, Moscow, Russia  
“Interaction of Charged Particles with Ultra Strong Electromagnetic Waves in the Radiation Dominant Regime”  
11 December 2003

Prof CERVANTES, Jorge A.  
University of Guanajuato, Mexico  
“Alkoxysilanes: Synthesis and Applications to Architectural Conservation”  
16 October 2003

Prof DE GENNES, Pierre-Gilles  
College de France, France  
“Phase Transitions of Nematic Rubbers”  
2 June 2003

Dr DEVOLDER, Thibaut  
CNRS-Université Paris-Sud, Orsay, France  
“Irradiation-Induced Magnetic Property Modifications: Basic Phenomena, Nanostructure Fabrication and Potential Applications”  
18 February 2003

Dr DOWDY Steven F.  
Howard Hughes medical Institute, UCSD School of Medicine, La Jolla CA, USA  
“Delivery of Novel Anti-Cancer Therapeutics and Mechanism of Protein Transduction”  
23 June 2003

Dr GLOTTER, Alexandre  
Laboratoire de Physique des Solides, CNRS, France  
“Implementing Spectral Deconvolution into Spectrum-imaging Mode: A New Step towards Combined High Spatial and Energy-resolution EELS”  
21 November 2003

Dr GRIESER, Manfred  
Max-Planck-Institut für Kernphysik, Heidelberg, Germany  
“Low Energy Storage Rings for Molecules, Heavy Ions and Antiprotons”  
13 May 2003

Prof HALEY, Michael M.  
Department of Chemistry, University of Oregon, USA  
“Chemistry of Metallabenzenes and Valence Isomers: New Ligands, New Metals, New Insights”  
1 October 2003

Prof HALLDORSON, Magnus  
Department of Computer Science, Faculty of Engineering, University of Iceland, Iceland  
“Design of a Marker Set for a Whole Genome Scan for Cancer”  
21 April 2003

Prof HUMERES, Eduardo  
Department of Chemistry, Universidade Federal de Santa Catarina, Brasil  
“Supermolecular Catalysis Induced by Polysaccharides”  
6 October 2003

Prof INOUE, Jun-ichiro  
Graduate School of Engineering, Nagoya University, Japan  
“Magnetoresistance in Exchange-Spring Multilayers with Twisted Spin Structures (Theories)”  
12 May 2003

Prof INOUE, Jun-ichiro  
Graduate School of Engineering, Nagoya University, Japan  
“Recent Topics on Spintronics”  
9 June 2003

Prof INOUE, Jun-ichiro  
Graduate School of Engineering, Nagoya University, Japan  
“Magnetism - From Fundamentals to Spintronics I”  
2 October 2003

Prof INOUE, Jun-ichiro  
Graduate School of Engineering, Nagoya University, Japan  
“Magnetism - From Fundamentals to Spintronics II”  
16 October 2003

Prof INOUE, Jun-ichiro  
Graduate School of Engineering, Nagoya University, Japan  
“Magnetism - From Fundamentals to Spintronics III”  
23 October 2003

Prof ISSIKI, Kenji  
Kochi Women's University, Kochi, Japan  
“Properties of Muroto Ocean Deep Water on the Basis of Trace Metals”  
6 December 2003

Dr IWASE, Hiroki  
Institute of Materials Structure Science, High Energy Accelerator  
Research Organization, Japan  
“Studies of Biomembranes Using the Neutron and X-ray  
Scattering Methods”  
12 December 2003

Dr KAPIN, Valeri  
National Institute of Radiological Sciences, Japan / Moscow  
Engineering Physics Institute, Russia  
“The Compact Linac (IH linac) for the Medical Accelerator”  
19 September 2003

Prof KIM, Yong Hae  
Korean Advanced Institute of Science and Technology (KAIST),  
Korea  
“Asymmetric Synthesis by Dual Enantioselective Control”  
25 February 2003

Prof KIMURA, Tsunehisa  
Faculty of Engineering, Tokyo Metropolitan University, Japan  
“Material Processing by Using a Magnetic Field”  
30 January 2003

Assoc Prof KOWALEWSKI, Tomasz  
Carnegie Mellon University, USA  
“Nanostructured  $sp^2$  Carbon Materials Derived from Well-  
Defined Block Copolymers”  
16 May 2003

Prof LAMMERTSMA, Koop  
Vrije University, Amsterdam, Netherlands  
“Organophosphorus Reagents-design, Properties, and  
Applications”  
20 February 2003

Prof LAUPRETRE, Françoise  
Laboratoire de Physico-Chimie Structurale et Macromoléculaire,  
Paris XII-Val de Marne University, France  
“NMR Investigation of the Molecular Organization of Complex  
Polymer Systems”  
13 May 2003

Prof LEE, Myong Euy  
Department of Chemistry, Yonsei University, Korea  
“Disilanols: Syntheses, Structures and Reactivities”  
16 October 2003

Prof LIU, Hung-wen  
Division of Medicinal Chemistry, College of Pharmacy, and  
Department of Chemistry and Biochemistry, University of Texas,  
USA  
“The Mechanistic Studies of UDP-galactopyranose Mutase: an  
Unusual Role of FAD in Enzyme Catalysis”  
20 October 2003

Prof MATYJASZEWSKI, Krzysztof  
Carnegie Mellon University, USA  
“Mechanisms of Atom Transfer Radical Polymerization”  
16 May 2003

Prof MESHKOV, Igor N.  
Joint Institute for Nuclear Research, Dubna, Russia  
“Electron Cooling Studies and Applications at Joint Institute for  
Nuclear Research”  
7 May 2003

Assoc Prof MITANI, Seiji  
Institute for Materials Research, Tohoku University, Japan  
“Tunneling Magnetoresistance in Granular Thin Films - From

Basics to Applications - III”  
14 January 2003

Assoc Prof MITANI, Seiji  
Institute for Materials Research, Tohoku University, Japan  
“Perpendicular Magnetoresistance in Co/Gd Multilayers with  
Twisted Spin Structures (Experiments)”  
12 May 2003

Dr NIERENGARTEN, Jean-François  
Institut de Physique et Chimie des Matériaux de Strasbourg,  
Groupe des Matériaux Organiques, Université Louis Pasteur et  
CNRS, France  
“Oligophenylenevinylene Oligomers: Versatile Building  
Blocks for Supramolecular Chemistry and Materials Science  
Applications”  
26 November 2003

Prof OGAWA, Kazufumi  
Faculty of Engineering, Kagawa University, Takamatsu, Japan  
“Applications of Chemisorbed Monomolecular Films: Attempts  
to Realize Molecular Wiring”  
17 January 2003

Dr PANKHURST, Quentin A.  
University College London, London, UK  
“Exchange Pinning in Core-Shell Nanoparticles”  
3 March 2003

Assoc Prof PILON, Marinus  
Biology Department, Colorado State University, USA  
“Metal Cofactor Assembly and Homeostasis in Plastids”  
4 November 2003

Assoc Prof PILON-SMITS, Elizabeth  
Biology Department, Colorado State University, USA  
“Studying Selenium Metabolism in Plants – A Biotechnological  
Approach”  
4 November 2003

Dr REISTAD, Dag  
The Svedberg Laboratory, Uppsala, Sweden  
“Status of Svedberg Laboratory in Uppsala and Future Plans”  
16 May 2003

Prof RICHARDS, Nigel G. J.  
Department of Chemistry, University of Florida, USA  
“Structure-Based Discovery of Inhibitors of Human Asparagine  
Synthetase”  
4 July 2003

Prof ROTH, Markus  
Technische Universität Darmstadt, Darmstadt, Germany  
“Laser Ion Production and its Beam Quality”  
19 February 2003

Prof RUBIN, Yves  
Department of Chemistry and Biochemistry, University of  
California, Los Angeles, USA  
“Chemistry of  $C_{60}$  and Approaches to Endohedral Metallo-  
fullerenes”  
1 October 2003

Prof SCOTT, Lawrence T.  
Merkert Chemistry Center, Boston College, USA  
“Chemical Methods for the Rational Synthesis of Fullerenes and  
Carbon Nanotubes”  
15 November 2003

- Dr SHCHAGIN, Alexander V.  
Hiroshima University, Hiroshima, Japan / Kharikov Institute of  
Physics and Technology, Kharkov, Ukraine  
“Investigation of Properties of Parametric X-ray Radiation”  
10 February 2003
- Prof SHEVELKO, Viatcheslav P.  
National Institute of Radiological Sciences, Chiba, Japan / P.N.  
Lebedev Physical Institute, Moscow, Russia  
“Target-density Effects in Electron-Capture Processes”  
16 October 2003
- Prof SHINMYOZU, Teruo  
Institute for Materials Chemistry and Engineering, Kyushu  
University, Japan  
“Synthesis, Structure, and Photoreaction of [3]Superphanes”  
26 July 2003
- Prof SHUBIN, Vyacheslav G.  
Novosibirsk Institute for Organic Chemistry, Russia  
“Long-Lived Cationic Complexes: Structure and Reactivity”  
15 December 2003
- Dr SOLLADIÉ, Nathalie  
Laboratoire d'Electrochimie et de Chimie Physique du Corps  
Solide, Université Louis Pasteur et CNRS, France  
“Structure-Reactivity Correlations in Extended Multi-Porphyrinic  
Architectures”  
26 November 2003
- Dr SYRESIN, Evgeny  
Joint Institute for Nuclear Research, Dubna, Russia  
“LSR Electron Cooler Simulation”  
9 January 2003
- Dr SYRESIN, Evgeny  
Joint Institute for Nuclear Research, Dubna, Russia  
“Ion Beam Stability at Cooling Stacking Injection”  
29 August 2003
- Prof TANABE, Tetsumi  
KEK, Ibaraki, Japan  
“Electrostatic Storage Ring”  
13-14 February 2003
- Prof ULANSKI, Jacek  
Technical University of Lodz, Poland  
“Low Frequency Raman Scattering in Polymers”  
21 November 2003
- Assoc Prof UTTAPAP, Dudsadee  
King Mongkut's University of Technology, Thailand  
“Properties of Edible Canna Starches”  
11 November 2003
- Prof VLASSOPOULOS, Dimitris  
FORTH and University of Crete, Greek  
“Control of the Rheological Behavior of Colloidal Star  
Polymers”  
20 March 2003
- Prof WATANABE, Junji  
Tokyo Institute of Technology, Tokyo, Japan  
“Banana-Shaped Liquid Crystal”  
6 June 2003
- Dr WATSON, William P.  
Syngenta Central Toxicology Laboratory, UK  
“Molecular Toxicology of Dienes”  
10 October 2003
- Prof WONG, Henry N. C.  
Department of Chemistry, The Chinese University of Hong  
Kong, P. R. China  
“The Quest of Non-natural Molecules: Hydroxytetraphenylenes  
and Pentacenes”  
21 November 2003
- Dr YAMAZAKI, Yoshishige  
Japan Atomic Energy Research Institute, Japan  
“Design Principles of JPARC Accelerator and Construction  
Status”  
10 June 2003



# MEETINGS AND SYMPOSIUMS

## The 9th International Seminar on Elastomers (ISE 2003) by Institute for Chemical Research, Kyoto University

Organized by KOHJIYA, Shinzo  
2-4 April 2003 (Kyoto, Japan)

## Minisymposium: Progress in Organic Silicon Chemistry

Organized by SATO, Naoki; TOKITOH, Norihiro  
19 June 2003

MATSUMOTO, Hideyuki  
Gunma University  
“Syntheses and Properties of Silicon-Based Condensed Polycyclic Molecules — Toward Fabrication of Si-Based Molecules of High Originality”

NISHINAGA, Tohru  
Kyoto University  
“Properties of Silicon Cations Embedded in  $\pi$ -Conjugated Systems”

TAKEDA, Nobuhiro  
Kyoto University  
“Creation of Novel Silicon-Active Chemical Species by Making Use of Bulky Substituents and Their Reactivities”

HIRATSUKA, Hiroshi  
Gunma University  
“Photophysics and Photochemistry of Organic Silicon Compounds”

TSUJI, Hayato  
Kyoto University  
“Conformation and Optical Properties of Silicon  $\sigma$ -Conjugated Systems”

## 8th Symposium of the Society of Silicon Chemistry Japan

Organized by TOKITOH, Norihiro  
17-18 October 2003 (Kyoto)

**Plenary Lecture**  
Prof ISHIKAWA, Mitsuo  
Department of Chemistry and Bioscience, Kurashiki University of Science and the Arts, Japan  
“Synthesis and Thermal Properties of Silacyclobutenes”

**Invited Lectures**  
Prof KAWAKAMI, Yusuke  
School of Materials Science, Japan Advanced Institute of Science and Technology, Japan  
“Elucidation of Stereochemistry of Asymmetric Silicon Centers by the Aid of Optically Active Silicon Compounds”

Prof LEE, Myong Euy  
Department of Chemistry, Yonsei University, Korea  
“Syntheses and Reactivities of Stable Halosilylenoids,  $(\text{Tsi})\text{X}_2\text{SiM}$  ( $\text{Tsi} = \text{C}(\text{SiMe}_3)_3$ ,  $\text{X} = \text{Br}, \text{Cl}$ ,  $\text{M} = \text{Li}, \text{K}$ )”

Dr IWAMOTO, Takeaki  
Department of Chemistry, Graduate School of Science, Tohoku University, Japan  
“Synthesis, Structure, and Properties of Stable Conjugated Disilenes”

Mr USHIO, Yoshito  
Electronics Industry S&T, Dow Corning Toray Silicone Co., Ltd., Japan  
“Development of Silicone Elastomer Film Adhesive”

Prof CERVANTES, Jorge  
Chemistry Department, University of Guanajuato, Mexico  
“Silicon Chemistry and Technology, Experiences in Building –up Research Program”

Dr SANJI, Takanobu  
Chemical Resources Laboratory, Tokyo Institute of Technology, Japan  
“How to Make Polysilanes with Controlled Structure”

Dr IMAI, Takafumi  
Pacific R&D Center, GE Toshiba Silicones Co., Ltd., Japan  
“Silicone Industry – the Present and the Future”

Prof SEKIGUCHI, Akira  
Department of Chemistry, University of Tsukuba, Japan  
“The Power of ‘Silyl-Trick’: Silyl-Substituted Tetrahedrans and Stable Heavier Group 14 Element Radicals”

Prof TAKAHARA, Atsushi  
Institute of Materials Chemistry and Engineering, Kyushu University, Graduate School of Engineering, Kyushu University, Japan  
“Two-dimensional Surface Property Control of Organosilane Nanofilms”

In addition, 88 posters were presented.

## The 21st Century COE-ICR Research Seminar on “Organic Thin Films”

Organized by SATO, Naoki; ISODA, Seiji; UMEMURA, Junzo; YOSHIDA, Hiroyuki  
7-8 November 2003

OZAKI, Hiroyuki  
Tokyo University of Agriculture and Technology  
“Formation, Characterization, Superstructure Fabrication of Organic Ultra-Thin films”

HASEGAWA, Takeshi  
Nihon University  
“New Analytical Method of Structural Anisotropies in Organic Thin Films with Infrared Spectroscopy”

KIMURA, Shunsaku  
Kyoto University  
“Measurements of Orientation of Helical Peptides at the Interfaces”

IWAMOTO, Mitsumasa  
Tokyo Institute of Technology  
“Examination of Dielectric Polarization Behaviors of Organic Molecular Films with their Maxwell Current, Surface Potential and Second Harmonic Generation Measurements”

ISHII, Hisao  
Tohoku University  
“Charging and Polarization Behaviors in Organic Thin Films and at their Interfaces”

MUNAKATA, Toshiaki  
The Institute of Physical and Chemical Research (RIKEN)  
“Development of Photoemission Microspectroscopy using Femtosecond Lasers”

YOSHIDA, Hiroyuki  
Kyoto University  
“Observation of Electronic Structures of Unoccupied States in Organic Thin Films using Inverse Photoemission Spectroscopy — Correlation with Polymorphism in the Case of Lithium Phthalocyanine”

YAMADA, Hirofumi  
Kyoto University  
“Examination of Organic Molecular Materials with Atomic Force Microscopy in the Dynamic Mode”

OGAWA, Kazufumi  
Kagawa University  
“Fundamentals and Applications of Chemisorbed Monomolecular Films”

YANAGI, Hisao  
Kobe University  
“Fabrications and Properties of Organic Low-Dimensional Structures in the Nano- to Meso-scope Scales”

HOSHINO, Akitaka  
Kyoto University  
“Variety in the Structure of Organic Epitaxial Films Based on Lattice Matching at the Interface”

SHIMADA, Toshihiro  
The University of Tokyo  
“Studies of Organic Thin Films using Surface Spectroscopy of FET Structures and Pulsed Molecular Beams”

KURATA, Hiroki  
Kyoto University  
“Structural Analyses of Organic Thin Films with Electron Spectromicroscopy”

**Kyoto University Alliance for Chemistry 21st Century COE Program, Elucidation of Nano Structures and Properties of Elastomeric Materials by Institute for Chemical Research, Kyoto University**

Organized by KOHJIYA, Shinzo  
14 November 2003 (Kyoto, Japan)

**44th Meeting on Glass and Photonics Materials**

Organized by YOKO, Toshinobu  
20-21 November 2003(Kyoto)

**COE Program for the 21st Century “Kyoto University Alliance for Chemistry”, ICR Symposium on Structural Organic Chemistry — Development of the Chemistry of  $\pi$ -Conjugated Systems**

Organized by KITAGAWA, Toshikazu  
1-2 December 2003 (ICR, Kyoto)

**Workshop for Design of Cooler Ring, S-LSR**

Organized by NODA, Akira (Kyoto University) and NODA, Koji (National Institute for Radiological Sciences)  
2-5 December 2003 (Kyoto)