

SELECTED GRANTS

DIVISION OF SYNTHETIC CHEMISTRY

— Organoelement Chemistry —

Tokitoh N, Sasamori T, Mizuhata Y, The Chemistry of Unsaturated Compounds of Heavier Main Group Elements: Pursuit of Novel Properties and Functions, Grant-in-Aid for Creative Scientific Research, 1 April 2005–31 March 2010.

Tokitoh N, Construction of Polycyclic Aromatic Compounds Containing Heavier Group 14 Elements and Development of Their Functions by Utilizing the Features of Main Group Elements, Grant-in-Aid for Scientific Research (B), 1 April 2010–31 March 2013.

Sasamori T, Construction of Novel d- π Electron Conjugated Systems Containing Heavier Main Group Elements and Transition Metals and Elucidation of Their Properties, Grant-in-Aid for Science Research on Priority Areas "Synergy of Elements", 1 April 2007–31 March 2010.

Mizuhata Y, Construction of Novel Silicon–Silicon Double-Bond Compounds Bearing Alkynyl Substituents, Grant-in-Aid for Young Scientists (B), 1 April 2009–31 March 2012.

Mizuhata Y, Syntheses of Polycyclic Aromatic Compounds Containing Heavier Group 14 Elements and Their Functions, Kinki Invention Center, 1 April 2010–31 March 2011.

Agou T, Development of Electron-accepting Conjugated Molecules Densely Substituted with Boron Atoms, Grant-in-Aid for Young Scientists (B), 1 April 2009–31 March 2011.

Kawashima T, Kobayashi J, Agou T, Development of Dimensionally-Extended Hetero- π -conjugated Molecules, Grant-in-Aid for Scientific Research (B), 1 April 2009–31 March 2012.

— Structural Organic Chemistry —

Murata Y, Synthesis and Properties of Bowl-shaped π -Systems by Top-down Approach, Grant-in-Aid for Young Scientists (A), 1 April 2008–31 March 2011.

Murata Y, Creation and Function of Spherical π -Space Encapsulating an Active Small Molecule, Grant-in-Aid for Scientific Research on Innovative Areas " π -Space", 1 December 2008–March 2013.

Wakamiya A, Creation of π -Electron Boron Clusters Using Lewis Basic Ligand, Grant-in-Aid for Challenging Exploratory Research, 1 April 2009–31 March 2011.

Wakamiya A, Development of Organic Dyes Based on Fine Tuning of π -Orbitals Using DFT Calculations, PRESTO (Preliminary Research for Embryonic Science and Technology), Japan Science and Technology Agency, 1 October 2010–31 March 2016.

Murata M, Construction of Spherical Conjugated π -Electron Systems and Elucidation of Their Functions, Grant-in-Aid for Young Scientists (B), 1 April 2010–31 March 2012.

— Synthetic Organic Chemistry —

Kawabata T, Fine Organic Synthesis Based on Catalytic Regioselective Functionalization, Grant-in-Aid for Scientific Research (A), 1 April 2009–31 March 2013.

Furuta T, Synthesis of Functionalized Artificial Phospholipids for Investigation of Membrane Related Biosystems, Grant-in-Aid for Scientific Research (C), 1 April 2008–31 March 2011.

Yoshimura T, Asymmetric Total Syntheses of Bioactive Natural Products via Planar Chiral Enolates, Grant-in-Aid for Young Scientists (B), 1 April 2009–31 March 2011.

DIVISION OF MATERIALS CHEMISTRY

— Chemistry of Polymer Materials —

Tsujii Y, Fabrication of Precise Characterization of Novel Tribomaterials, Grant-in-Aid for Scientific Research (A), 1 April 2009–31 March 2012.

Tsujii Y, Development of Novel Nanosystems by Hierarchically Assembling Concentrated Polymer Brushes, CREST Program by JST, 1 October 2009–31 March 2012.

Tsujii Y, Research and Development of Safe Solid-Electrolyte by Hybridization of Ionic Liquids and Polymers, Research and Development for Promotion of Regional Innovation Program by JST, 9 August 2010–31 March 2011.

Ohno K, Development of Next-Generation MRI Contrast Agent, Industrial Technology Research Grant Program by NEDO, 1 July 2009–30 June 2013.

— Polymer Controlled Synthesis —

Yamago S, Creation of Hoop-Shaped π -Conjugated Molecules through the Supramolecular Chemical Approach and Elucidation of Their Properties, Core Research for Evolutional Science and Technology (CREST), Japan Science and Technology Agency, 1 October 2010–31 March 2016.

— Inorganic Photonics Materials —

Masai H, Fabrication of Glass-ceramic Containing Oxide Semiconductor and Metal Nanocrystallites, Grant-in-Aid for Young Scientists (B), 1 April 2010–31 March 2013.

Masai H, Fabrication of White Phosphor for UV LED Using Low-melting Glass, Adaptable and Seamless Technology Transfer Program through Target-driven R&D, 1 October 2010–31 March 2011.

— Nanospintronics —

Ono T, Current-induced Spin Dynamics and Its Application to Spintronic Devices, Grant-in-Aid for Young Scientists (S), 1 October 2007–31 March 2012.

Kobayashi K, Generation and Detection of Quantum Correlation in Semiconductor Nanostructures, Grant-in-Aid for Young Scientists (S), 1 October 2007–31 March 2012.

Chiba D, Study on the Electric-field Manipulation of Magnetization, Grant-in-Aid for Young Scientists (A), 1 April 2009–31 March 2012.

DIVISION OF BIOCHEMISTRY

— Biofunctional Design-Chemistry —

Futaki S, Novel Methods for Delivering Nucleic Acids Therapeutics, JST, Strategic Japanese-Swedish Cooperative Programme on “Multidisciplinary BIO”, 1 July 2009–30 June 2012.

— Chemistry of Molecular Biocatalysts —

Hiratake J, Applications of Cellular Collagen Biosynthesis Induced by Novel γ -Glutamyl Transpeptidase (GGT) Inhibitors, Adaptable and Seamless Technology Transfer Program through Target-Driven R & D (A-STEP), Japan Society and Technology Agency, 1 December 2009–31 March 2012.

— Molecular Biology —

Aoyama T, Mechanism of Cytokinin Signal Transduction by the Response Regulator ARR1, Grant-in-Aid for Scientific Research (B), 1 April 2009–31 March 2012.

Tsuge T, Regulatory Mechanism of Plant Morphogenesis by the Regulator of mRNA Metabolism SAP130, Grant-in-Aid for Scientific Research (C), 1 April 2010–31 March 2012.

— Chemical Biology —

Uesugi M, Small-molecule Initiated Analysis of Cellular Signaling, Grant-in-Aid for Scientific Research (B), 1 April 2009–31 March 2012.

Uesugi M, Small Molecules that Promote the Production of iPS Cells, The Project for Realization of Regenerative Medicine, 1 April 2008–31 March 2013.

Uesugi M, Practical Application of Small Molecules that Promotes Cell Adhesion, Adaptable and Seamless Technology Transfer Program through Target-Driven R&D, 1 November 2009–31 October 2010.

Kawazoe Y, Chemical Genetic Analysis of Vacuole Formation, Grant-in-Aid for Scientific Research (C), 1 April 2008–31 March 2011.

DIVISION OF ENVIRONMENTAL CHEMISTRY

—Molecular Materials Chemistry—

Kaji H, Fabrication of High-Performance Polymer EL Devices Having Covalently-Bonded Interfaces, Grant-in-Aid for Scientific Research (A), 1 April 2009–31 March 2012.

Kaji H, Development of Solid-State NMR Methodology for the Structure Analysis of Donor-Acceptor Supramolecules, Grant-in-Aid for Challenging Exploratory Research, 1 April 2009–31 March 2010.

Goto A, Development of Green Living Radical Polymerization with Low Cost, Industrial Technology Research Grant Program by NEDO, 10 September 2007–31 August 2011.

Goto A, Fundamentals and Applications of New Living Radical Polymerization, Kyoto University Step-up Research Grant, 4 June 2009–31 March 2010.

—Hydrospheric Environment Analytical Chemistry—

Sohrin Y, Development of Precise Isotopic Analysis for Founding Heavy Stable Isotopic-Marine Chemistry, Grant-in-Aid for Scientific Research (B), 1 April 2009–31 March 2012.

Sohrin Y, Development of Marine Geochemistry of Palladium, Platinum and Gold, Grant-in-Aid for Challenging Exploratory Research, 1 April 2010–31 March 2012.

Murayama M (Investigator: Sohrin Y), Reconstruction of Redox Conditions in Meedee Lake, Mediterranean, Sediment Core Using Molybdenum/Tungsten Ratio, Grant-in-Aid for Scientific Research (C), 1 April 2010–31 March 2013.

—Solution and Interface Chemistry—

Matubayasi N, Free-Energy Analysis of ATP Hydrolysis, Grant-in-Aid for Scientific Research on Innovative Areas “Hydration and ATP Energy”, 1 December 2008–31 March 2013.

—Molecular Microbial Science—

Kurihara T, Molecular Basis of Cold Adaptation of Psychrotrophic Bacteria, Grant-in-Aid for Scientific Research (B), 1 April 2008–31 March 2011.

Kurihara T, Exploration of Cold-Adapted Microorganisms for Development of New Low-Temperature Biotechnological Processes, Grant-in-Aid for Scientific Research (B), 1 April 2010–31 March 2013.

Kurihara T, Investigation of Chaperone Function of Phospholipids Containing Polyunsaturated Fatty Acids and Their Application to Overproduction of Membrane Proteins, Grant-in-Aid for Challenging Exploratory Research, 1 April 2010–31 March 2012.

Kurihara T, Construction of a New Protein Expression System by Using Cold-Adapted Microorganisms Isolated from Polar Regions, Research Grant from Institute for Fermentation, Osaka (IFO), 1 April 2010–31 March 2011.

Kawamoto J, Development of a System for the Bioremediation of Rare Metal Pollution and Rare Metal Recovery Using Novel Metal-Metabolizing Bacteria, Grant-in-Aid for Scientific Research (B), 1 April 2009–31 March 2012.

DIVISION OF MULTIDISCIPLINARY CHEMISTRY **—Polymer Materials Science—**

Kanaya T, Polymer Crystallization and Control of Higher Order Structure Control through Non-equilibrium Intermediate States, Grant-in-Aid for Scientific Research (A), 1 April 2008–31 March 2011.

Inoue R, Surface and Interfacial Physical Properties of Polymer Thin Films Studied by Neutron Scattering, Grant-in-Aid for Young Scientists (B), 1 April 2010–31 March 2012.

—Molecular Rheology—

Watanabe H, Creation of Non-equilibrium Soft Matter Physics: Structure and Dynamics of Mesoscopic Systems, Grant-in-Aid for Scientific Research on Priority Areas “Creation of Non-Equilibrium Soft Matter Physics”, 1 October 2006–31 March 2011.

Watanabe H, Effect of Thermodynamical and Geometrical Constraints on the Dynamics of Block-copolymers, Grant-in-Aid for Scientific Research (B), 1 April 2009–31 March 2012.

Masubuchi Y, Multi-scale Simulations for Soft Matters, Core Research for Evolutional Science and Technology, Japan Science and Technology Agency, 1 October 2006–31 March 2012.

Masubuchi Y, A Novel Molecular Model for Branched Polymer Dynamics, Grant-in-Aid for Scientific Research (B), 1 April 2008–31 March 2011.

Matsumiya Y, Analysis on Mechanical Properties of Multi-Component Fluids Utilizing Dielectric Measurements, Grant-in-Aid for Young Scientists Research (B), 1 April 2010–31 March 2012.

Uneyama T, Theory of Mechanical and Dielectric Response of Polymers under Shear Flow, Grant-in-Aid for Young Scientists (B), 1 April 2010–31 March 2012.

—Molecular Aggregation Analysis—

Yoshida H, Inverse-Photoemission Spectroscopy with Zero Kinetic Energy Electrons for Measuring the Unoccupied Electronic States of Organic Semiconductors, JST PRESTO, 1 October 2009–31 March 2012.

—Supramolecular Biology—

Umeda M, Membrane Lipid Field Produced by Phospholipid Flippase and Its Role in Cytoskeletal Reorganization, Grant-in-Aid for Scientific Research on Priority Areas, 1 April 2008–31 March 2010.

Ikenouchi J, Elucidation of Molecular Mechanisms Which Generate and Maintain Discrete Membrane Domains in Polarized Cells, PRESTO, Japan Science and Technology Agency, 1 October 2007–31 March 2011.

Ikenouchi J, Determination of Lipid Compositions of Particular Membrane Domains in Epithelial Cells, Grant-in-Aid for Young Scientists (A), 1 April 2009–31 March 2013.

Kato U, Basic Research for Development of Novel Anti-tumor Drugs Targeting Membrane Phospholipid Flip-flop, Grant-in-Aid for Young Scientists (B), 1 April 2009–31 March 2011.

ADVANCED RESEARCH CENTER FOR BEAM SCIENCE **—Particle Beam Science—**

Noda A, Creation of Innovation Centers for Advanced Interdisciplinary Research Areas: Photo-Medical Valley, Special Coordination Funds for Promoting Science and Technology, 1 June 2007–31 March 2010.

Iwashita Y, Application and Development of Super Strong Permanent Magnet Especially for Linear Collider and Neutron Optics, Grant-in-Aid for Scientific Research (A) (1), 1 April 2006–31 March 2010.

—Laser Matter Interaction Science—

Sakabe S, Fine Wire High-energy Electron Gun Driven by an Intense Femtosecond Laser, Grant-in-Aid for Challenging Exploratory Research, 1 April 2010 –31 March 2012.

Sakabe S, Demonstration of Ultra-fast Electron Diffraction Using Electrons Accelerated in Plasmas Produced by an Intense Short Pulse Laser, Yamada Science Foundation, 1 April 2010 –31 March 2012.

Sakabe S, Time Resolved Electron Microscope with Intense Femtosecond Laser Produced Electrons, Grant-in-Aid for Scientific Research (A), 1 April 2006–31 March 2010.

Hashida M, Amorphous Metal Thin Film with the Surface of Periodic Nano-structures Self-formed by Femtosecond Laser Pulses, Grant-in-Aid for Scientific Research (C), 1 April 2010 –31 March 2013.

Hashida M, Improvement of Ablation Rate for Femtosecond Laser Processing, Amada Foundation for Metal Work Technology, 14 December 2007–31 March 2010.

Tokita S, Development of Short-Pulse Intense Laser Technology in Mid-Infrared Fluoride Fiber Lasers, Grant-in-Aid for Young Scientists (B), 1 April 2010–31 March 2012.

Tokita S, Development of Mid-Infrared Femtosecond Fiber Laser Using Fluoride Glass Fibers, Amada Foundation for Metal Work Technology, 15 December 2008–31 March 2011.

Tokita S, Development of Mid-Infrared High-Power Ultrashort-Pulse Fiber Laser, Grant-in-Aid for Young Scientists (B), 1 April 2008–31 March 2010.

—Electron Microscopy and Crystal Chemistry—

Kurata H, Local State Analysis of Defects and Interface Regions by Spherical Aberration Corrected STEM and EELS, Grant-in-Aid for Scientific Research (B), 1 April 2007–31 March 2010.

Isoda S, Development of Observation Method of Polymer Composite Materials without Staining by Scanning Transmission Electron Microscope, Grant-in-Aid for Scientific Research (C), 1 April 2008–31 March 2011.

INTERNATIONAL RESEARCH CENTER FOR ELEMENTS SCIENCE

—Organic Main Group Chemistry—

Nakamura M, Development of New Synthetic Organic Reactions Based on the Universal Metals Catalysis, Grant-in-Aid for Young Scientists (S), 1 April 2008–31 March 2013.

—Advanced Solid State Chemistry—

Shimakawa Y, Strategic State-of-the-art Solid State Chemistry for New Functional Materials: Exploring for New Multifunctional Materials, Grant-in-Aid for Creative Scientific Research, 1 April 2007–31 March 2012.

—Organotransition Metal Chemistry—

Ozawa F, Takita R, Nakajima Y, Studies of Cross-coupling Reactions for Precise Synthesis of π -Conjugated Polymers, Grant-in-Aid for Scientific Research on Priority Areas, 1 April 2008–31 March 2010.

Ozawa F, Okazaki M, Takita R, Nakajima Y, Synergistic Effects of Transition Metals and Heavier Main Group Elements in Functional Organometallic Complexes, Grant-in-Aid for Priority Area “Synergy of Elements”, 1 September 2006–31 March 2010.

Nakajima Y, Efficient Photoreduction of Carbon Dioxide Catalyzed by an Iron Complex Bearing a Phosphaalkene Ligand, PRESTO Program, Japan Science and Technology Agency, 1 October 2009–31 March 2012.

—Photonic Elements Science—

Kanemitsu Y, Microscopic Spectroscopy of Highly Excited State in Semiconductor Nanostructures and Exploring Novel Optical Functionality, Grant-in-Aid for Scientific Research on Innovative Areas “Optical Science of Dynamically Correlated Electrons”, 13 November 2008–31 March 2013.

BIOINFORMATICS CENTER

—Bioknowledge Systems—

Kanehisa M, Backbone Database for Analysis of the Biological Systems and Environment, Grant-in-Aid for Scientific Research on Priority Areas, MEXT, 1 April 2005–31 March 2010.

Kanehisa M, Deciphering Systemic Biological Functions by Integration of Genomic and Environmental Information, Bioinformatics Research and Development, JST, 1 April 2006–31 March 2011.

Goto S, Hierarchical Structuring and Integration of Knowledge in Life Sciences, Integrated Database Project, MEXT, 1 April 2007–31 March 2011.

—Biological Information Networks—

Akutsu T, Kawabata T, Nagamochi H, Hayashida M, An Approach to Novel Structural Design by Combining Discrete Methods and Kernel Methods, Grant-in-Aid for Scientific Research (A) (General), 1 April 2010–31 March 2015.

Akutsu T, Discrete Model-Based Methods for Control of Complex Biological Systems, Grant-in-Aid for Challenging Exploratory Research, 1 April 2010–31 March 2013.

—Pathway Engineering—

Mamitsuka H, Integrative Mining from Semi-structured Data in Life Sciences, Institute for Bioinformatics and Research Development, Japan Science and Technology Agency, 1 October 2007–30 September 2010.

ENDOWED RESEARCH SECTION

—Water Chemistry Energy (AGC) —

Nakahara M, Development of Formic Acid Production Highly Controlled by the Water-Gas Shift Reaction, Aiming at the Hydrogen Storage and the Hydrogen Transportation, to Promote Basic Research by Research Personnel in Private-Sector Business, Japan Science and Technology Agency, 1 December 2009–30 November 2010.