

Title of Project	Head Investigator Name	Term of Project
Grammatological Informatics Based on the Corpora of Asian Scripts	Bhaskararao Peri Professor, Institute for the Study of Languages and Cultures of Asia and Africa, Tokyo University of Foreign Studies	2001-2005
TRON Based System Suitable for Handling Large Kanji Character Sets	Ken Sakamura Professor, Interfaculty Initiative in Information Studies Graduate School of Interdisciplinary Information Studies, The University of Tokyo	2002-2005
Nationwide Chronological Studies on Voting Behaviors in the Early 21st Century	Ken'ichi Ikeda Professor, Graduate School of Humanities and Sociology, Faculty of Letters, The University of Tokyo	2001-2005
Research on Development of Legal Education Methods to Promote Creative Legal Minds - Towards the Science of Law for Law Creation	Hajime Yoshino Professor, Faculty of Law, Meiji Gakuin University	2002-2006
Comprehensive Study on Structure and Change of Social Stratification System in Contemporary Japan	Yoshimichi Sato, Tohoku University, Graduate School of Arts and Letters, Professor	2004-2007
Primate foundation of learning and thought	Tetsuro Matsuzawa, Professor, Primate Research Institute, Kyoto University	2004-2008
Three-Level Structure of Civil Society and Governance: A Comprehensive Comparative Study of Japan, Korea, the United States, Germany, and China	Yutaka Tsujinaka, Professor, Graduate School of Humanities and Social Sciences, University of Tsukuba	2005-2009
An Empirical Study of Life Styles, Norms and Values through the AsiaBarometer	Takashi Inoguchi, Professor, Faculty of Law, Chuo University	2005-2008

Title of Project	Head Investigator Name	Term of Project
Dynamics and its coherent control of equilibrium and nonequilibrium electrons in semiconductor quantum structures	Susumu Komiyama Professor, Department of Basic Science, The University of Tokyo	2001-2005
Development of Extremely-short-pulse Generation and Interaction of Materials	Takayoshi Kobayashi Professor, Graduate School of Science, The University of Tokyo	2002-2005
Nano-systems on the Surface of Liquid Helium	Kitotoshi Kono Chief Scientist, Low Temperature Physics Laboratory, RIKEN (The Institute of Physical and Chemical Researches)	2002-2005
Towards Extreme Field Science via Relativistic Engineering	Toshiki Tajima, Director General, Kansai Research Establishment, Japan Atomic Energy Research Institute (JAERI)	2003-2007
Development of the 4 Spaces Access Neutron Spectrometer (4SEASONS) and Elucidation of the Mechanism of Oxide High-Tc Superconductivity	Masatoshi Arai, Principal Scientist, Group Leader, R&D Group for Neutron Instrument, Center for Neutron Science, Japan Atomic Energy Research Institute	2005-2009
Study of Quantum Critical Phenomena at Micro Kelvin Temperatures	Haruhiko Suzuki, Professor, Graduate School of Natural Science and Technology, Kanazawa University	2005-2009
Research on Structural Formation and Selection Rules in Turbulent Plasma	Sanae-I. Itoh, Research Institute for Applied Mechanics, Kyushu University, Professor, Fellow of Institute of Physics	2004-2008
Atomistic Clarification, Control and Prediction of Irradiation-Induced Embrittlement and Degradation Nuclear Reactor Steels by Advanced Technology of Nano-Materials Science	Masayuki Hasegawa, Professor, Institute for Materials Research, Tohoku University	2005-2009
Development of an ultra-high resolution semi-conductor PET (next generation PET) with resolution smaller than 1mm	Keizo Ishii, Professor, Graduate School of Engineering, Tohoku University	2005-2009

Title of Project	Head Investigator Name	Term of Project
Title of the Project: Search for cosmic-ray antiparticles of primary origins by ballooning a superconducting spectrometer in Antarctica	Akira Yamamoto Professor, High Energy Accelerator Research Organization	2001-2005
Monte Carlo Shell Model	Takaharu Otsuka Professor, Graduate School of Science, The University of Tokyo	2001-2005
Search for new celestial objects using microlensing effect	Yasushi Muraki Professor, Solar-Terrestrial Environment Laboratory, Nagoya University	2002-2006
Diffraction-Limited Near-Infrared Observation of Distant Universe with 8m Subaru Telescope Equipped with a Laser Guide Adaptive Optics System	Masanori Iye Professor, National Astronomical Observatory of Japan	2002-2006
Search for Double Hyper-nuclei	Kenichi Imai, Professor, Graduate School of Science, Kyoto University	2003-2007
Research of non-thermal phenomena in the Universe by hard X-ray imaging	Hideyo Kunieda, Professor, Institute of Space and Astronautical Science	2003-2006
Antihydrogen Spectroscopy	Ryugo Hayano, Professor, Graduate School of Science, University of Tokyo	2003-2007
Advanced Study of the Star-Formation Process by High Resolution Imaging with Far-Infrared Interferometer	Hiroshi Shibai, Nagoya University, Professor, Graduate School of Science	2003-2007
Precision tests of the Standard Model based on high-energy collisions between the proton and the longitudinally-polarized electron	Katsuo Tokushuku, High Energy Accelerator Research Organization (KEK), Institute of Particle and Nuclear Studies, Associate Professor	2004-2008
High Precision and High Sensitivity Measurements of Electron Anti-Neutrinos from Reactors and inside the Earth, and Electron Neutrinos from the Sun	Atsuto Suzuki, Tohoku University, Graduate School of Science, Professor	2004-2008
Elucidation on the Origin of First Generation Objects by HMCS-E (Heterogeneous MultiComputer System-Embedded)	Masayuki Umemura, University of Tsukuba, Graduate School of Pure and Applied Sciences, Professor	2004-2007
Observational study of the cosmic hot plasma and the development of the high performance X-ray CCD	Hiroshi Tsunemi, Osaka university, Graduate school of science, Professor	2004-2008
Spin-isospin responses in nuclei in time-like region by means of exothermic charge-exchange reactions	Hideyuki Sakai, Professor, Graduate School of Science, The University of Tokyo	2005-2009

Title of Project	Head Investigator Name	Term of Project
Title of project: Elucidation of Molecular Mechanisms for Biomagnetite Formation and Its Application	Tadashi Matsunaga Professor, Department of Biotechnology, Tokyo University of Agriculture and Technology	2001-2005
Novel Functional Materials with Multinary Freedoms	Toshiro Takabatake Professor, Material Research Center, Hiroshima University	2001-2005
Establishment of Molecular Nano-Engineering by Utilizing Nanostructure Arrays and its Development into Micro-Systems	Iwao Ohdomari Professor, Research Center for Molecular Nano-Engineering, Waseda University	2001-2005
Water Dynamics; Fluctuation and Chemical Reactions	Iwao Ohmine Professor, Graduate School of Science, Nagoya University	2002-2005
Development of Environment-Benign Molecular Transformation Processes Using Lewis Acid and Transition Metal Catalysts	Yoshinori Yamamoto Professor, Graduate School of Science, Tohoku University	2002-2006
Simulations and dynamics of real molecular systems	Kimihiro Hirao Professor, School of Engineering, The University of Tokyo	2002-2005
High-resolution, element-specific microscope using a laser-produced-plasma soft X-ray source	Masaki Yamamoto, Professor, Research Center for soft X-ray Microscopy, Institute of Multidisciplinary Research for Advanced Materials, Tohoku University	2003-2007
Device Process for Integrated Systems Composed of Dislocation-Free III-V-N Alloys and Silicon	Hiroo Yonezu, Professor, Department of Electrical and Electronic Engineering, Toyohashi University of Technology	2003-2005
Research on Asymmetric Autocatalysis, Chiral Recognition and Origin of Chirality	Kenso Soai, Professor, Faculty of Science, Tokyo University of Science	2003-2007
Nonadiabatic Chemical Dynamics Revealed by the Zhu-Nakamura Theory	Hiroki Nakamura, Professor, Institute for Molecular Science, Okazaki National Research Institutes	2003-2005
Development of metal complexes with antidiabetic effect	Hiromu Sakurai, Kyoto Pharmaceutical University, Faculty of Pharmaceutical Sciences, Department of Analytical and Bioinorganic Chemistry, Professor	2004-2006
Formation of diffusion barrier bond coat to realize high reliable and Long life thermal barrier coating	Toshio Narita, Professor, Graduate school of Engineering, Hokkaido University	2004-2008
Laser spectroscopic study on hydrogen-bond-network structures of water-solvated clusters.	Naohiko MIKAMI, Professor, Tohoku University, Graduate School of Science,	2004-2006
The Innovative Synthesis of Bioactive Molecules on the basis of the Molecular Mechanism of Natural Products' Activity	Minoru Isobe, Nagoya University, Graduate School of Bioagricultural Sciences, Professor	2004-2008
Creation of a New Academic Research Field "Metallomics"	Hiroki Haraguchi, Nagoya University, Graduate School of Engineering, Professor	2004-2006
Highly Controlled New Materials of Heavy Group-14 Elements. Creation and Development of Their Unique Functions	Mitsuo Kira, Professor, Graduate School of Science, Tohoku University	2005-2008
Molecular Design and Quantum Hysteresis of Polyoxometalates-based Molecular Magnets	Toshihiro Yamase, Professor, Chemical Resources Laboratory, Tokyo Institute of Technology	2005-2007
Science and Technology of Concentrated Polymer Brushes	Takeshi Fukuda, Professor, Institute for Chemical Research, Kyoto University	2005-2008
Basic Processes In Hydrogen Atom-Surface Reactions: Spin Effect, Reaction Dynamics, and Origin of Interstellar Hydrogen Molecules	Akira Namiki, Professor, Faculty of Engineering, Kyushu Institute of Technology	2005-2009

Title of Project	Head Investigator Name	Term of Project
Establishment of novel ultrahigh-speed distortion-free optical transmission technology using time-domain optical Fourier transformation	Masataka Nakazawa, Tohoku University Research Institute of Electrical Communication, Professor	2004-2008
Efficient Pattern Discovery from Massive Semi-Structured Data for Knowledge Infrastructure Formation on the Web	Hiroki Arimura, Hokkaido University, Graduate School of Information Science and Technology, Professor	2005-2007
Establishment of Verified Numerical Computation	Shin'ichi Oishi, Professor, Faculty of Science and Engineering, Waseda University	2005-2009
Role of Hydrogen in Gigacycle Fatigue Failure and Establishment of Fatigue Strength Reliability	Yukitaka Murakami Professor, Graduate School of Engineering, Kyushu University	2002-2006
Establishment of Non-Newtonian Thermal Elastohydrodynamic Lubrication Theory	Motohiro Kaneta, Professor, Faculty of Engineering, Kyushu Institute of Technology	2003-2007
Optimization of the Innovative Asymmetric Catalysts and New Application	Masakatsu Shibasaki, Professor, Graduate School of Pharmaceutical Sciences, The University of Tokyo	2003-2007
Development of Detection Methods of Dynamical Higher Order Structures of Proteins and Its Application to Elucidation of Structure-Function Relations of Proteins	Teizo Kitagawa Professor, Center for Integrative Bioscience Okazaki National Research Institutes	2002-2006

Title of Project	Head Investigator Name	Term of Project
Molecular mechanisms of cytokine in immune response and autoimmune disease	Toshio Hirano, Professor, Graduate School of Frontier Biosciences, Osaka University	2003-2007
Regulation of Hematopoietic Stem Cell Division in a Niche	Toshio Suda, Keio University, School of Medicine, Professor	2004-2008
Molecular mechanism and physiological role of apoptosis	Shigekazu Nagata, Professor, Graduate School of Frontier Bioscience, Osaka University	2005-2009
Signal Transduction and Physiological Significance of the Small GTPase Rho and Rho-mediated Processes	Shuh Narumiya Professor, Faculty of Medicine, Kyoto University	2001-2005
Transcriptional regulation by mediators and its physiological role	Shunsuke Ishii Chief Scientist, Laboratory of Molecular Genetics, RIKEN (The Institute of Physical and Chemical Researches)	2002-2006
Formation of the integrated insulin secretion system and its failure	Susumu Seino, Professor, Kobe University Graduate School of Medicine	2003-2007
Research on lipid mediators and lipid metabolome	Takao Shimizu, The University of Tokyo, Faculty of Medicine, Professor	2003-2007
Molecular mechanisms of oncogene-induced anchorage independent growth	Hidesaburo Hanafusa, Osaka Bioscience Institute, Director	2004-2008
Postnatal developmental changes in synaptic molecules underlying maturation of excitatory synaptic transmission and synaptic regulation	Tomoyuki Takahashi, Professor, Graduate School of Medicine, The University of Tokyo	2005-2007
AID-dependent genetic alteration mechanism to generate antigen-specific antibodies	Tasuku Honjo, Professor, Immunology and Genomic Medicine, Graduate School of Medicine, Kyoto University	2005-2009

Title of Project	Head Investigator Name	Term of Project
Molecular Mechanism of Intracellular Transport: Approaches from Molecular Cell Biology, Structural Biology, and Molecular Genetics	Nobutaka Hirokawa Professor, Graduate School of Medicine, The University of Tokyo	2001-2005
Brain distributed memory network : Towards the integration of functional imaging study and single-unit neurophysiology	Yasushi Miyashita Professor, Graduate School of Medicine, The University of Tokyo	2002-2006
Dynamics of synapse and exocytosis studied with two-photon excitation microscope	Haruo Kasai, National Institute of Natural Sciences, National Institute for Physiological Sciences, Professor/University of Tokyo, Faculty of Medicine, Professor	2004-2008
Studies on molecular mechanisms that control development and function of the neural network	Shigetada Nakanishi, Director, Osaka Bioscience Institute	2005-2009
Molecular Mechanism of flexible Development and Differentiation in Plants	Makoto Matsuoka Professor, Bioscience Center, Nagoya University	2001-2005
Maintenance and Inheritance of Divers Life by the Regulatory Mechanism of Chromosome Dynamics	Mitsuhiro Yanagida Professor, Graduate School of Biostudies, Kyoto University	2001-2005
Mitochondrial membrane biogenesis and regulation of the membrane dynamics	Katsuyoshi Mihara Professor, Graduate School of Medical Science, Kyushu University	2002-2006
The Single Molecular Design and Systemic Assembly of Protein Function	Shin'ichi Ishiwata Professor, School of Science and Engineering, Waseda University	2002-2006
Molecular Mechanism of Membrane Dynamics during Autophagy	Yoshinori Ohsumi, Institution, Department, Title of Position National Institute for Basic Biology, Dept. of Cell Biology, Professor	2003-2007
Cell adhesion machine-associated signaling mechanisms regulating cell behavior	Masatoshi Takeichi, Group Director, RIKEN Laboratory for Cell Adhesion and Tissue Patterning	2003-2006
Structural study of signal transduction through membrane proteins, channels and receptors	Yoshinori Fujiyoshi, Kyoto University, Graduate School of Science, Professor	2004-2008
Regulatory mechanisms of meiosis	Masayuki Yamamoto, University of Tokyo, Graduate School of Science, Professor	2004-2008
Elucidating mechanisms of biological molecular machines by single-molecule physiology	Kazuhiko Kinoshita, Jr., National Institutes of Natural Sciences, Okazaki Institute for Integrative Bioscience, Professor	2004-2008
Mechanisms that lead to the difference in equational and reductional chromosome segregation	Yoshinori Watanabe, Professor, Institute of Molecular and Cellular Biosciences, The University of Tokyo	2005-2009
Chromatin Dynamics underlying Cellular Memory	Susumu Hirose, Professor, Department of Developmental Genetics, National Institute of Genetics	2005-2007
Uncovering the mystery of molecular assembly and diversity of the proteasome	Keiji Tanaka, Vice director, Tokyo Metropolitan Institute of Medical Science, The Tokyo Metropolitan Organization for Medical Research	2005-2009