



Chapter 4 Science and Technology Supported by Society and the Public

1 Responsible Approaches to Ethical, Legal and Social Issues in S&T

(1) Establishment of a sense of ethics for researchers and engineers

In recent years, Japan has faced a situation where misconduct, such as fabrication, falsification, or plagiarism (FFP) of data in research, has been revealed. Such misconduct in scientific research must not be allowed since it goes against the essential qualities of science to create new knowledge through accumulated searches for truth. Misconduct also undermines public trust in science and hinders scientific progress.

Following the approval of the Proper Counteractions against Research Misconduct by CSTP in February 2006, CSTP revised the Countermeasures against Misconduct in Research Activities by the Competitive Research Fund (agreement in the Liaison Committee of Ministries and Agencies Concerned with Competitive Funding) in November 2006 to stipulate measures for FFP in research. To rectify these problems, MEXT, MAFF and many other ministries, have implemented approaches to misconduct, and established a reception desk for accusations.

In October 2006, SCJ formulated the Code of Conduct for Scientists, which specified ethical standards scientists are to observe, and the Charter of the Science Council of Japan in April 2008, as an external vow derived from the full will of the Council members.

(2) Efforts in relation to bioethics and safety in the life sciences

To adequately deal with problems regarding bioethics that could occur as a result of the rapid growth in the life sciences in recent years, CSTP implements surveys and studies on important issues; MEXT and MHLW review necessary acts, regulations, and guidelines (Refer to Part 2, Chapter 2, Section 2, 1).

(3) Measures to address the social impact of nanotechnology

In order for nanotechnology to be accepted by society and to enable it to develop, it is necessary to correctly assess the impact of nanomaterials on the human body and the environment. Therefore, based on the results of the Research Project on Facilitation of Public Acceptance of Nanotechnology under the Special Coordination Funds for Promoting Science and Technology, NIMS is implementing the Development of Platform Technologies for Public Acceptance of Nanomaterials [literal translation].

2 Accountability in S&T and Improvement of Information Dissemination

Many people in Japan feel that science and technology contributes to the society. There are high expectations for S&T to bring safety or relief to our lives and global problems, and to deliver spiritual richness. However, rapid progress in S&T is also generating a sense of unease. Public support and understanding is essential for the social acceptance of science and technology, which will continue to develop further in the future. We can achieve this through openly sharing research, disseminating outcomes in easy-to-understand ways, enhancing accountability and information release, and promoting dialogue with the public.



In June 2010, the CSTP set out the “Basic policy for the promotion of ‘S&T Dialog with the Public [literal translation],” and informed relevant bodies. This policy aims to actively encourage researchers who are in receipt of 30 million yen or more in government funding for any one research project during the course of a year to explain their research activities in layman’s terms and engage in a two-way dialog with the public

MEXT stipulated in the application guidelines for the Research and Development Program for Resolving Critical Issues that about 3% of direct expenses should be allocated to outreach activities¹ under the Special Coordination Funds for Promoting Science and Technology and that these outreach activities should be subject to interim and post evaluations.

In addition, the Japan Science and Technology Agency (JST) has put together a “Children’s White Paper on Science and Technology”, which offers simple explanations of recent S&T issues and research using illustrations, cartoons, and photographs. This document was distributed to public elementary schools and libraries nationwide.

The Ministry of Agriculture, Forestry and Fisheries (MAFF) is providing an information service and opportunities for exchanges of views for producers and consumers related to R&D on pioneering technology in the field of agriculture and fisheries. Furthermore, independent administrative research institutions have been offering open public lectures throughout the year to present an overview of research activities and achievements.

3 Improving Public Awareness of S&T

In order to create a society where people are familiar with and strongly interested in S&T, it is important to promote activities to present S&T in layman’s terms. This could include providing opportunities for members of the public to become more familiar with S&T and to enhance accountability and information dissemination through communication between researchers/technicians and society. It is also important to promote efforts to improve basic S&T knowledge and skills.

(1) Reinforcing and enhancing science museum activities

The National Museum of Emerging Science and Innovation (Miraikan) - managed by JST – produces and puts on exhibitions that make state-of-the-art science easy to understand. Lectures and events also encourage exchange between researchers and the general public. Also, their core activities for promoting understanding of S&T in Japan include implementing a traveling exhibition service for regional science museums, and training people to become science communicators.

The National Museum of Nature and Science holds exhibitions and implements activities to show how fascinating science is, to provide an opportunity for people to think together, and to support learning. These events target a broad range of ages, from young people to adults, and utilize the intellectual, material, and human resources of the museum including research achievements and specimen samples that have been accumulated in this national center of natural history and history of S&T. The museum has also developed a practical training program for “Science Communicators” to enable them to promote the understanding of

¹ Outreach activities: Activities through which S&T are conveyed to people in an easy-to-understand and friendly manner, and increasing awareness of the needs and uneasiness of the public by deepening dialogues, and outcomes are reflected in the S&T activities of the entity executing such activities.



S&T through programs for the cultivation of age-appropriate science literacy and to cooperate with schools to develop and promote scientific experience-based learning programs.

(2) Activities of universities and research institutions

MEXT organizes public lectures on S&T at universities in an effort to further understanding of S&T. In addition, in order to convey how interesting science is, MEXT offers “Science Cafes” and other events that allow the general public to communicate directly with scientists.

The Japan Society for the Promotion of Science (JSPS) has implemented a project called “HIRAMEKI☆TOKIMEKI SCIENCE (Science that Inspires and Inspires)”, which offers a simple overview of the results of recent research funded by the Grants-in-Aid for Scientific Research to elementary and junior high school students through hands-on experience, experiments and lectures.

The Science Council of Japan (SCJ) organizes lectures in an effort to return academic achievements to the general public. Four such lectures were offered in FY 2010. The themes included “The problem of disposing of high-level radioactive waste: the search for a solution,” “The future of Japanese Language,” “Toward an accelerated promotion of joint participation of men and women in academia: hints from analyzing survey results” and “Rebuilding systems for employment, labor, safety and sanitation: for a healthy and safe life for working people.”

JAXA implements a variety of different educational activities. Such activities include the Cosmic College and Space School, with the aim of raising interest in S&T in general, including space science among young people who will lead the next generation, and to foster children's scientific observational, thinking, and problem-solving skills.

AIST has permanent exhibition facilities, such as the Science Square Tsukuba/Rinkai, Geological Museum and the JIS Pavilion. In FY 2010, eight facilities were opened to the public and they welcomed a total of about 10,000 visitors. Furthermore, AIST implements Science Communication projects, including the Science Cafe, Experiment Class, and Delivery Lecture, so that the activities will help the public to understand S&T.

(3) Promoting activities for enhancing understanding of S&T in the regions

JST supports experiment classes, events, and the construction of networks by science museums, universities, local governments, and volunteers to promote regional science and technology communication activities throughout the country.

In addition, through the “Children's Dream Fund” - established in the National Institution for Youth Education - JST offers subsidies for the private sector to organize activities to enable children to experience science.

(4) Disseminating S&T information to regions across the country

JST has created videos that present topics related to S&T in layman's terms for the general public, especially for young people. These programs are broadcast nationwide via the internet (<http://sc-smn.jst.go.jp>).



(5) Science & Technology Week

The 51st Science & Technology Week was held from April 12 to 18, 2010, in cooperation with related organizations, such as experimental research institutions and local governments. During the week, various facilities throughout the country were opened to the public for hands-on exhibits and activities. For example, the symposium entitled “Toward the realization of shining Japan based on strength of S&T” was held at the Tokyo International Exchange Center. Science cafés were also held in many areas like Tokyo’s Marunouchi district, so that researchers and the general public could chat about science and technology over a cup of coffee.

(6) Fusing S&T with culture and art

Fusing of S&T with culture and art may result in the creation of new works of art, creation of new unique technologies in the S&T field as well as creation of new ideas and knowledge. In FY 2009, JST organized an event called “Fusion of Science and Art” in Tokyo and Kagawa prefectures, for the general public to learn about S&T through culture and the arts.

(7) Awards for science and technology

(Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology)

MEXT commends individuals for their important achievements in R&D related to S&T and their promotion of S&T understanding. The award is aimed at motivating S&T researchers and helping to raise standards in Japan’s S&T. The award ceremony was held at the Keio Plaza Hotel on April 13, 2010. (Table 2-4-1)

Table 2-4-1/FY 2010 Commendations for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology

○ Prizes for Science and Technology (Development Category)

Name	Title	Achievement (literal translation)
Tomonori Aoyama	Special Guest Professor, Graduate School of Media and Governance, Keio University	Development and training in high-speed digital image signal processing technology
Kazushige Arimochi	Senior Consultant, Sheet & Plate Process Research & Development Department, Corporate Research & Development Laboratories, Sumitomo Metal Industries, Ltd.	Development of steel plate for improving fatigue strength in welded joints
Akinori Inami	Manager, Steel Plate Technology Department, Sumitomo Metal Industries, Ltd.	
Kazushi Onishi	Deputy Director, Steel Plate Technology Department, Sumitomo Metal Industries, Ltd.	
Hiroshi Katsumoto	Manager Steel Plate Department, Plate Quality Control Section, Sumitomo Metal Industries, Ltd.	
Noboru Konda	Senior Research Engineer, Corporate Research & Development Laboratories, Sumitomo Metal Industries, Ltd.	
Takashi Ito	Specially Appointed Professor, Solutions Research Laboratory, Integrated Research Institute, Tokyo Institute of Technology	Development of thermal nitride gate FET technology for VLSI devices



Name	Title	Achievement (literal translation)
Noboru Imai	Research Group Leader, Geoinformation Center, National Institute of Advanced Industrial Science and Technology	Development of new geochemical reference materials
Takashi Okai	Senior Researcher, The institute of Geology and Geoinformation, National Institute of Advanced Industrial Science and Technology	
Shigeru Terashima	Technical Staff, The institute of Geology and Geoinformation,, National Institute of Advanced Industrial Science and Technology	
Masumi Mikoshiba	Senior Researcher, The institute of Geology and Geoinformation,, National Institute of Advanced Industrial Science and Technology	
Atsuyuki Ota	Researcher, The institute of Geology and Geoinformation,, National Institute of Advanced Industrial Science and Technology	Development of a non-contact microtremor measuring system for vibration diagnosis of railway structures
Fumiaki Uehan	Senior Researcher, Railway Dynamics Division (structural dynamics), Railway Technical Research Institute	
Kimiro Meguro	Professor / Director, International Center for Urban Safety Engineering, Institute of Industrial Science, The University of Tokyo	Development of high performance bearings through grain refinement and reinforcement
Chikara Oki	Manager, Industrial Technical Center, NTN Corporation	
Yasunori Okada	Professor, School of Medicine, Keio University	Development of methods to measure MMP-3 serum concentrations based on a breakthrough in the regulation of tissue activity
Hiromu Ono	Group Manager, Production Preparation Group, Suzuka Center, Fuji Xerox Manufacturing Co., Ltd.	Development of a self-scanning LED print head and manufacturing technology
Shunsuke Ueda	Team Manager, LPH Engineering Team, Production Preparation Group, Suzuka Center, Fuji Xerox Manufacturing Co., Ltd.	
Kazunori Hagi	Team Manager, LPH Engineering Team, Production Preparation Group, Suzuka Center,, Fuji Xerox Manufacturing Co., Ltd.	
Tomohiko Kasai	Senior Manager, Packaged Air Conditioner Manufacturing Department, Air-Conditioning and Refrigeration Systems Works, Mitsubishi Electric Corporation	Development of environmentally-conscious air conditioning equipment reusing existing ducts, and associated renewal technology
Mitsunori Kurachi	Director, Osaka Office Branch Manager, Mitsubishi Electric Air-Conditioning and Refrigeration Systems Co., Ltd.	
Hiroshi Kubo	Senior Manager, Wireless Communication Technology Department, Information Technology R&D Center, Mitsubishi Electric Corporation	Development of an adaptive equalization technique for mobile communication
Akihiro Okazaki	Manager, Wireless Transmission Group, Wireless Communication Technology Department, Information Technology R&D Center, Mitsubishi Electric Corporation	
Takayuki Nagayasu	Head Researcher, Transmission Control Group, Wireless Communication Technology Department, Information Technology R&D Center, Mitsubishi Electric Corporation	
Michiru Sakamoto	Deputy Director, Materials Research Institute for Sustainable Development, National Institute of Advanced Industrial Science and Technology	Development of non-combustible magnesium alloys
Hidetoshi Ueno	(Then) Eminent Researcher, Materials Research Institute for Sustainable Development, National Institute of Advanced Industrial Science and Technology	
Masaru Sasago	Team Leader, Semiconductor Company, Panasonic Corporation	Development of excimer laser lithography technology for semiconductor microfabrication



Name	Title	Achievement (literal translation)
Tsuyoshi Shiina	Professor, Graduate School of Medicine, Kyoto University	Development of ultrasound elastography
Takeshi Matsumura	Engineer, Ultrasound Systems Division, Hitachi Medical Corporation	
Takeshi Mitake	Senior Chief Engineer, Ultrasound Systems Division, Hitachi Medical Corporation	
Masayuki Shibuya	Section Manager, Engineering and Development Section, Customer Engineering Department, Sumitomo Metals (Naoetsu), Ltd.	Development of a high-fatigue-strength stainless steel plate for use in high-performance gaskets
Takashi Katsurai	Chief Engineer, Materials Research 1, Honda R&D Americas, Inc.	
Kazuhiko Adachi	Senior Researcher Engineer, Stainless Steel & Titanium Research & Development, Sumitomo Metal Industries, Ltd.	
Nobuhisa Suzuki	Principal Researcher, Steel Research Laboratory, JFE Steel Corporation	Development of a high-strength line pipe with excellent strain capacity
Nobuyuki Ishikawa	Senior Researcher, Steel Research Laboratory, JFE Steel Corporation	
Jo Kondo	Manager, Welded Pipe Section, West Japan Works, JFE Steel Corporation,	
Takekazu Arakawa	Staff General Manager, Tubular Products Business Planning Department, JFE Steel Corporation	
Shigeru Endo	Staff General Manager, Plate Business Planning Department, JFE Steel Corporation	
Mitsunori Takase	Managing Officer & General Manager, Nutritional Science Institute, Morinaga Milk Industry Co., Ltd.	Development of manufacturing process of tasty protein hydrolysate with low antigenicity
Toshikazu Takata	Professor, Graduate School of Science and Engineering, Tokyo Institute of Technology	Development of a novel manufacturing method for a silan coupling agent for energy-saving tires (green tires)
Nobuo Yamada	Chemical Specialties Sales Div., Technical Development Dept., Daiso CO., LTD.	
Yukitoshi Takahashi	Director of Clinical Research Division, Shizuoka Institute of Epilepsy and Neurological Disorders, National Hospital Organization	Development of a diagnostic method for refractory autoimmune-mediated neurological disorders with infection as a causative factor
Kunio Torii	Chief Executive Fellow, Institute of Life Sciences, Ajinomoto Co., Inc.	Food development based on the important role of glutamate signaling in the body
Satoshi Nakamura	Executive Director, Knowledge Creating Communication Research Center, National Institute of Information and Communications Technology	Development of a multilingual automatic speech-to-speech translation system
Eiichiro Sumita	Groupleader, Language Translation Group, Knowledge Creating Communication Research Center, National Institute of Information and Communications Technology	
Toru Shimizu	General Manager, Mobile Network Service Group, Network Service Planning Department, Product and Service Department, KDDI Corporation	
Shigeki Matsuda	Expert Researcher, Spoken Language Communication Laboratory, Knowledge Creating Communication Research Center, National Institute of Information and Communications Technology	
Andrew Michael Finch	Expert Researcher, Language Translation Group, Knowledge Creating Communication Research Center, National Institute of Information and Communications Technology	
Masato Nishitani	Doctor, Biofunctional Alternative Medicine Course, Graduate School of Medicine, Osaka University	Development of a household air conditioner and its protocol with demonstrated anti-fatigue effects
Tomohiro Sugino	Representative Director., Soiken, Inc.	
Sayaka Aoyagi	Senior Staff Member, Japan Preventive Medicine, Inc.	
Yukishige Shiraichi	Supervisor, Health and Environment Systems Group Sharp Corporation	
Masaki Otsuka	Manager, Health and Environment Systems Group Sharp Corporation	



Name	Title	Achievement (literal translation)
Hironao Hakogi	Director, Network Device, Development Dept., Optical Components Div., Fujitsu Optical Components Limited	Development of a 40GLN optical modulator for optical communications
Takehito Tanaka	Network Device, Development Dept., Optical Components Div., Fujitsu Optical Components Limited	
Masaharu Doi	Network Device, Development Dept., Optical Components Div., Fujitsu Optical Components Limited	
Masaki Sugiyama	Network Device, Development Dept., Optical Components Div., Fujitsu Optical Components Limited	
Keiji Hatsuyama	Managing Officer, General Manager, Kira Plant, Aisin Takaoka Co., Ltd	Development of a high-quality die casting technology through process control and a new molding mechanism
Tomio Nimi	General Manager, Quality Control Dept., Higashiura Plant, Aisin Takaoka Co., Ltd	
Makoto Kaneso	Assistant Manager, Casting Engineering Team, Engineering Team, Quality Control Dept., Higashiura Plant, Aisin Takaoka Co., Ltd	
Seiji Hanaoka	C.E.O., Seiko Epson Corporation	Development and training of real-time control technology for a small business printers
Kojiro Hamabe	Manager, System Platforms Research Laboratories, NEC Corporation	Development of transmission power control technology for mobile communication systems
Shosei Yoshida	Assistant Manager, Division for Promotion of Intellectual Asset R&D, Intellectual Asset R&D Unit, NEC Corporation	
Minoru Maeda	Manager, Business Planning Division, NTT-GP ECO communication, Inc.	Development of a displacement measurement system using a light wave camera with built-in crack scale
Kazuhide Nakaniwa	CEO, Kansai Construction Survey Co., Ltd.	
Fusayoshi Masuda	Representative Director / Executive Vice President, Sanyo Chemical Industries, Ltd.	Development of a super-absorbent polymer
Toshiyuki Yamauchi	Research Director, Electronics R&D Center, Panasonic Electric Works Co., Ltd.	Development of an air purifier using electrostatic atomization technology
Hiroshi Suda	Engineer, Electronics R&D Center, Panasonic Electric Works Co., Ltd.	
Tadashi Yamaura	Chief Researcher, Voice & Language Technology, Information Technology R&D Center, Mitsubishi Electric Corporation	Development of a wireless office audio codec
Hirohisa Tasaki	Team Leader, Voice & Language Technology, Information Technology R&D Center, Mitsubishi Electric Corporation	
Satoru Furuta	Chief Researcher, Voice & Language Technology, Information Technology R&D Center, Mitsubishi Electric Corporation	
Tadashi Ikeda	Full-time Staff, Second Technical Division, Community Communication Systems Department, Communication Network Group, Mitsubishi Electric Chief Researcher	
Tomohiro Oka	Full-time Staff, First Team, First System Division, Information and Communication Systems Group, Mitsubishi Electric Chief Researcher	
Muneyoshi Yamada	Headmaster, Akita National College of Technology, Institute of National Colleges of Technology	Development of a selective hydrodesulfurization catalyst for the production of an ultralow sulfur diesel fuel.
Shigeto Hatanaka	Senior Vice President, Central Technical Research Laboratories, Nippon Oil Corporation	
Naoto Koizumi	Post Doctoral Scholar, The Pennsylvania State University	
Susumu Yoshimura	Executive Board Member, Nagasaki Institute of Applied Science	Development of solid electrolytic capacitors using organic semiconductor compositions
Fumio Watanabe	Executive Director, Network Technical Development Division, Technology Sector, KDDI Corporation	Development of a high-performance CDMA mobile telephone using antenna diversity
Shinichi Nomoto	Corporate Officer, KDDI R&D Laboratories	

○ Prizes for Science and Technology (Research Category)

Name	Title	Achievement (literal translation)
Akira Asaoka	Professor Emeritus, Nagoya University	Systematic research for the clarification of static and dynamic soil responses, based on elasto-plastic mechanics
Masaki Nakano	Professor, Graduate School of Engineering, Nagoya University	
Toshihiro Noda	Professor, Graduate School of Engineering, Nagoya University	
Kentaro Nakai	Assistant Professor, Graduate School of Engineering, Nagoya University	Research into the creation of novel materials using specific features of reactions in supercritical water
Tadafumi Ajiri	Professor, Advanced Institute for Materials Research, Tohoku University	
Fujio Abe	Special Researcher, National Institute for Materials Science	
Masaaki Tabuchi	High Temperature Materials Group Leader, Materials Reliability Center, National Institute for Materials Science	
Masaki Taneike	Senior Staff, Takasago Research & Development Center, Mitsubishi Heavy Industries, Ltd.	
Hirokazu Okada	Chief Research Specialist, Corporate Research & Development Laboratories, Sumitomo Metal Industries, Ltd.	Research into increasing creep strength of ferritic heat resisting steels
Susumu Tsukamoto	NIMS Fellow, National Institute for Materials Science	
Masanori Ie	Professor, Division of Optical and Infrared Astronomy, National Astronomical Observatory of Japan, National Institutes of Natural Sciences	
Hideki Takami	Professor, Hawaii Observatory, National Astronomical Observatory of Japan, National Institutes of Natural Sciences	
Yutaka Hayano	Assistant Professor, Hawaii Observatory, National Astronomical Observatory of Japan, National Institutes of Natural Sciences	Research into a laser guide star adaptive optics system to enhance telescopic vision
Juntaro Ishii	Head of Research Department, National Metrology Institute of Japan, National Institute of Advanced Industrial Science and Technology	
Katsumi Ida	Professor, High-Temperature Plasma Physics Research Division, Department of Helical Plasma Research, National Institute for Fusion Science, National Institutes of Advanced Industrial Science and Technology	Discovery of rotational flow in plasma confined by magnetic field and research into improved performance of fusion plasma
Akihide Fujisawa	Professor, Research Institute for Applied Mechanics, Kyushu University	
Shinichi Oishi	Professor, Faculty of Science and Engineering, Waseda University	Research to establish numerical computation with guaranteed accuracy
Takahiko Otani	Professor Emeritus, Doshisha University	Development of an ultrasonic bone strength measurement system
Hiroshi Omori	Professor, Graduate School of Environmental Studies, Nagoya University	Development of a structural form creation technique and research relating to its application to structure design
Masamichi Ogasara	Laboratory Chief, Drive Control Laboratory, Vehicle Control Technology Division, Railway Technical Research Institute	Development of a contact-wire/battery hybrid system
Yoshiaki Taguchi	Vice Chief Researcher, Drive Control Laboratory, Vehicle Control Technology Division, Railway Technical Research Institute	
Masanao Ozawa	Professor, Graduate School of Information Science, Nagoya University	Pioneering research into quantum measurement theory
Akira Kageyama	Professor, Graduate School of System Informatics, Kobe University	Research into a geodynamo using computer simulation and VR technology
Kazunori Kataoka	Professor, Institute of Engineering Innovation, Graduate School of Engineering, The University of Tokyo	Research relating to functional polymeric micelles for drug delivery



Name	Title	Achievement (literal translation)
Toshihide Kamata	Research Group Chief, Research Center for Photonics Research Institute, National Institute of Advanced Industrial Science and Technology	Research relating to film printing technology for electronic devices
Manabu Yoshida	Senior Researcher, Research Center for Photonics Research Institute, National Institute of Advanced Industrial Science and Technology	
Takehito Kozasa	Senior Researcher, Research Center for Photonics Research Institute, National Institute of Advanced Industrial Science and Technology	
Satoshi Hoshino	Senior Researcher, Research Center for Photonics Research Institute, National Institute of Advanced Industrial Science and Technology	
Sei Uemura	Researcher, Research Center for Photonics Research Institute, National Institute of Advanced Industrial Science and Technology	
Taroh Kinoshita	Professor, WPI Immunology Frontier Research Center, Osaka University	Clarification and applied medical research into groups of genes that are involved in the lipid or glycan remodeling of the GPI-anchor
Yusuke Maeda	Associate Professor, Research Institute for Microbial Diseases, Osaka University	
Toshio Goto	Professor Emeritus, Nagoya University	Pioneering research into radical-controlled plasma processing
Masaru Hori	Professor, Graduate School/School of Engineering, Nagoya University	
Takayoshi Kobayashi	Project Professor, Department of Informatics, Faculty of Informatics and Engineering, University of Electro-Communications	Research into ultrashort pulsed laser and ultrafast spectroscopy technology
Nagao Kobayashi	Professor, Graduate School of Science, Tohoku University	Research relating to the absorption spectra of phthalocyanines
Kazuki Saito	Professor, Graduate School of Pharmaceutical Sciences, Chiba University	Research into plant genome function based on metabolomics
Shunjiro Shinohara	Associate Professor, Interdisciplinary Graduate School of Engineering Science, Kyushu University	Research into physical phenomena of high density plasma production by helicon waves and engineering application
Takao Tanikawa	Professor, Research Institute of Science and Technology, Tokai University	
Kostiantyn Pavlovych Shamrai	Institute for Nuclear Research, National Academy of Sciences of Ukraine, Head of Department	
Katsuhiko Shirahige	Professor, Laboratory of Epigenetic Regulations, Institute of Molecular and Cellular Biosciences, The University of Tokyo	Research into genomic profiling for understanding the dynamic aspect of chromosome behavior.
Mikiko Sodeoka	Chief Scientist, Synthetic Organic Chemistry Laboratory, RIKEN Advanced Science Institute	Research into enantio selective reactions with transition metal-catalyzed enolates as the key
Hidenori Takagi	Group Director, Complex Electrons and Functional Materials Research Group, RIKEN Advanced Science Institute	Research into novel electronic phases in transition metal oxides
Shoichi Tanaka	Professor Emeritus, University of Tokyo	Research into techniques for producing methane hydrate
Hideo Narita	Director, Methane Hydrate Research Center, The National Institute of Advanced Industrial Science and Technology	
Masanori Kurihara	Director, General Manager, Petroleum Engineering and Consulting Department, Japan Oil Engineering Co. Ltd.	
Koji Yamamoto	Methane Hydrate Research Project Team, Technology Research and Development Department, Japan Oil, Gas and Metals National Corporation	
Nobuo Tanaka	Professor Emeritus, Kyoto Institute of Technology	Research relating to structural properties of monolithic silica columns for high-performance liquid chromatography
Kazuki Nakanishi	Associate Professor, Graduate School of Science, Kyoto University	
Hiroyoshi Minaguchi	Representative Director, Kyoto Monotech	
Shigefusa Chichibu	Professor, Institute of Multidisciplinary Research for Advanced Materials, Tohoku University	Research into the optical properties of nitride mixed-crystal semiconductors containing indium

Name	Title	Achievement (literal translation)
Kozo Tomita	Director, Biomedical Research Institute, the National Institute of Advanced Industrial Science and Technology	Structural research into the molecular dynamics of enzymatic reactions
Kazushige Nakao	Executive Chief Engineer, Mitsubishi Electric Corporation	Research into a high-absorption heat pump for waste heat recovery
Masaki Ikeuchi	Former Director, Mitsubishi Electric Air-conditioning and Refrigeration Systems Co., Ltd.	
Tsuneo Yumikura	General Manager of Engineering, Mitsubishi Electric Air-conditioning and Refrigeration Systems Co., Ltd.	
Eiichi Ozaki	Full-time Officer, Sales Department, Environment Facility, Mitsubishi Electric Corporation	
Yushi Hirata	Professor Emeritus, Osaka University	
Hisamatsu Nakano	Professor, Faculty of Engineering, Hosei University	Theoretical and practical research concerning non-linear circularly polarized antennae
Masaya Notomi	Senior Research Scientist, Supervisor, Basic Research Laboratories, Nippon Telegraph and Telephone Corporation	Research into light propagation and confinement in photonic crystals
Masao Fukasawa	Director, Research Institute for Global Change, Japan Agency for Marine-Earth Science and Technology	Research into bottom water warming in the Pacific Ocean
Shunichi Fukuzumi	Professor, Graduate School of Engineering, Osaka University	Research into artificial photosynthetic systems
Terunori Fujita	Board Director, Center Executive, Research Center, Mitsui Chemicals, Inc.	Development of new olefin polymerization catalysts and their application to novel polyolefinic materials
Tsutomu Matsumoto	Professor, Graduate School of Environment and Information Sciences, Yokohama National University	Research into security evaluation of biometrics authentication
Ikuro Maruyama	Project Professor, Graduate School of Medical and Dental Sciences, Kagoshima University	Integrated research relating to the endothelial anticoagulant Thrombomodulin
Koji Suzuki	Executive Vice President (Research and Development), Mie University	
Shunji Yamamoto	Former Advisor, Noguchi Institute	
Michitaka Zushi	ART Project Manager, Pharmaceutical Sales Division, Asahi Kasei Pharma Corporation	
Yoshikazu Aoki	ART Project Manager, Pharmaceutical Sales Division, Asahi Kasei Pharma Corporation	
Norio Miyaura	Specially Appointed Professor, Graduate School of Engineering, Hokkaido University	Research into catalyzed carbon-carbon bond formation using arylboronic acids
Masashi Miyano	Chief Scientist, Structural Biophysics Laboratory, RIKEN Spring-8 Center	Functional study based on a crystal structure analysis of G-Protein Coupled Receptor (GPCR) rhodopsin
Tetsuji Okada	Professor, Department of Life Sciences, Faculty of Science, Gakushuin University	
Junichi Murota	Professor, Research Institute of Electrical Communication, Tohoku University	Research into atomically controlled CVD processing systems for group IV semiconductors
Akihito Yamaguchi	Professor (Director), Institute of Scientific and Industrial Research, Osaka University	Research relating to the structure, function and control as well as physiological role of Xenobiotic Efflux Proteins



Name	Title	Achievement (literal translation)
Masahiro Yamaguchi	Associate Professor, Graduate School of Image Science and Engineering Laboratory, Tokyo Institute of Technology	Natural vision research
Hideaki Haneishi	Professor, Research Center for Frontier Medical Engineering, Chiba University	
Yuri Murakami	Fellow, Graduate School of Image Science and Engineering Laboratory, Tokyo Institute of Technology	
Nagaaki Oyama	Professor, Graduate School of Image Science and Engineering Laboratory, Tokyo Institute of Technology	
Minoru Yoshida	Chief Scientist, Chemical Genetics Laboratory, RIKEN Advanced Science Institute	Research into the regulation of gene expression informed by chemical genomics
Teruhiko Wakayama	Team Leader, Laboratory for Genomic Reprogramming, RIKEN Center for Developmental Biology	Research into the practical application of mammal cloning
Yasuyoshi Watanabe	Director, RIKEN Center for Molecular Imaging Science	Research into ways to overcome fatigue and integrative approaches to fatigue science making full use of pioneering technology

○ Prizes for Science and Technology (Science and Technology Promotion Category)

Name	Title	Achievement (literal translation)
Yoshio Isozaki	Director, Marine Technology and Engineering Center, Japan Agency for Marine-Earth Science and Technology	Promotion of a scientific drilling technology through the development of a pioneering scientific drilling vessel
Takashi Egawa	Professor, Graduate School of Engineering, Nagoya Institute of Technology	Promotion of the commercialization of GaN crystal growth and device application technology
Mitsuo Ochi	Professor, Executive (Medical Affairs), Graduate School of Biomedical Sciences, Hiroshima University	Promotion of cartilage regeneration technology using three-dimensional culture techniques
Kenichiro Hata	Managing Director, Japan Tissue Engineering Co., Ltd.	
Katsura Sugawara	Senior Researcher, Research and Development Department, Japan Tissue Engineering Co., Ltd.	