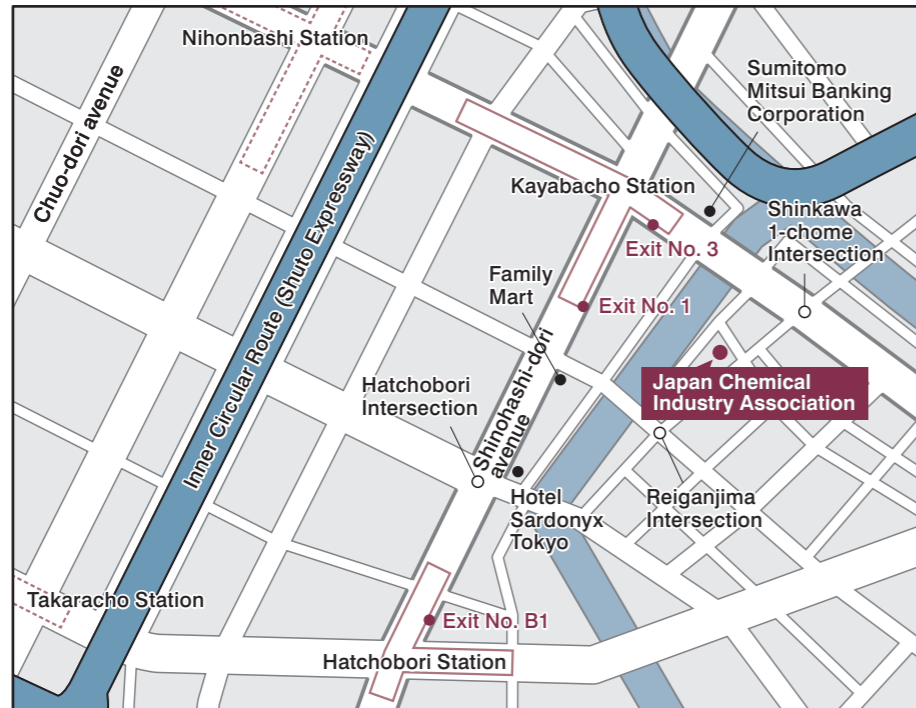


JCIA Annual Report 2014

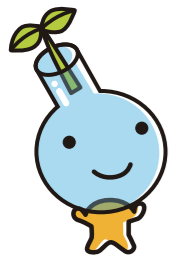


Access

Kayabacho Station (Tokyo Metro Hibiya and Tozai Lines)
Walk straight ahead from Exit No. 3 and turn right at the Shinkawa 1-chome Intersection.
Approximately 3 minutes on foot

Kayabacho Station (Tokyo Metro Hibiya Line)
Walk straight ahead from Exit No. 1, turn left at the intersection with a Family Mart store, and then turn left at the Reiganjima Intersection.
Approximately 3 minutes on foot

Hatchobori Station (JR Keiyo Line)
Approximately 8 minutes on foot from Exit No. B1



Nikka-chan: JCIA's official character



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JCIA Annual Report 2014

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[JCIA URL]

<http://www.nikkakyo.org/>



QR Code



Japan Chemical Industry Association

Message from the Chairman

Key Words: “Safety,” “Innovation,” and “Communication”

—The chemical industry will contribute to society by committing to solve global issues—



Throughout history, the chemical industry has supported the development of society. Today, as we are faced with environmental problems like climate change and global challenges in areas such as food, population, water, energy, health, and hygiene, that role is becoming increasingly important. At the same time, unfortunately, accidents are continuing to occur in the chemical industry, and improvements are urgently needed. When I was appointed as the new chairman of the Japan Chemical Industry Association (JCIA), I stated that in order for the chemical industry to overcome these challenges and benefit society, the key actions were “sharing and applying safety best practices” “creation of innovations

that contribute to society,” and “enhancing communication with society.”

Efforts to Establish Safety

—Most important issue for the chemical industry—

The first key action, “sharing and applying safety best practices”, is a major issue in the chemical industry. Undeniably, “security and safety” form the foundation of the chemical industry’s survival. Therefore, we will ask member companies to engage in efforts to establish “security and safety” throughout the industry. At the same time, we will be even more proactive by supplying information to nonmember chemical companies and other industries

and providing them with support and cooperation. In order to establish a high level of safety, it is essential for the top executives of organizations to continue to act with a strong sense of crisis and urgency. The JCIA will aim to raise awareness through various activities and provide opportunities for the supply and exchange of information.

Furthermore, we will continue efforts on promotion and enlightenment for member companies so that Responsible Care ensuring effective safety, environmental, and health standards are put into practice in every process, from the manufacture of products to their disposal.

Promoting the Creation of Innovations

—Offering solutions to world-scale issues—

The second key action, “creation of innovations that contribute to society,” moves toward the realization of a sustainable society through innovation. The chemical industry has tremendous potential as a solution provider to solve the many challenges facing humankind in the twenty-first century. To achieve this goal, it is necessary, to develop innovative technologies and design new business models. As an advocate for the infrastructure required to launch innovations and move forward, JCIA will call on the government to adopt preferential measures and build an environment for the promotion of research and development.

Today, Japan’s population is declining, so expanding domestic demand will not be easy. From a global perspective, the environment surrounding Japan’s chemical industry, which relies heavily on imports for resources, is difficult, and its cost competitiveness is weak. Under these circumstances, the only way to survive and contribute to a sustainable society is to provide high added value. I believe that the Japanese chemical industry, which has great potential to supply beneficial solutions, is capable of creating new innovations that will resolve challenges on a global scale and provide new values to society.

Sending a Clear Message

—For better understanding of the chemical industry—

The third key action, “enhancing communication with society,” is an important point as well. JCIA has been sending out clear messages in an attempt to improve society’s understanding of the chemical industry; moving forward, we must strengthen these efforts, coordinating with international organizations to heighten communication around the world in an effort to advance acknowledgement and support of the chemical industry.

In this regard, the International Council of Chemical Associations (ICCA*) Board of Directors meeting and symposium held in Japan in May this year, the first time outside Europe and the United States, was an excellent opportunity to convey the efforts of the global chemical industry to the wider world. In addition, the ICCA and other related organizations will display leadership in promoting the industry’s position and engagement at the 21st Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP21*)

to be held in Paris in 2015. An international framework for reducing global greenhouse gas emissions is expected to be agreed upon at COP21. Furthermore, as soon as the “sustainability package” combining technologies and efforts relating to chemicals management, Responsible Care, and environmental safety has been compiled, JCIA will disseminate this information in Asian countries in collaboration with local authorities, companies, and others.

The chemical industry is wide-ranging and more complex than other industries. Therefore, we must explain the potential and contribution of various products, one by one, and send out a clear message that the chemical industry is essential to the development of society.

Fostering of the Highly Motivated and Passionate Human Resources Needed by the Chemical Industry

The Japanese chemical industry has by far the greatest potential for providing solutions to the global challenges facing us today. However, these innovative solutions cannot be achieved overnight. The creation of a single innovation is a long-term commitment for 20 or 30 years. However, the most important factor to successful innovation is human resources. The development of an outstanding skilled work force is key to ensuring security and safety which I mentioned at the beginning of this message.

What the Japanese chemical industry needs now are people with aspirations to compete on the front lines of a global business world, a bold and challenging spirit, and a passion to create new things. For this purpose, JCIA is not only looking close at home but also taking a long-term perspective. While helping to train current employees in the industry, we are also devoting our efforts to developing the next generation of workers. So far we have taken measures at each stage, from elementary schools to graduate schools, and we will continue to support career development opportunities to foster the “new” leaders of the chemical industry in the next generation.

Demands on the chemical industry will only increase with time. We at JCIA will enhance our efforts in various ways in order to meet these needs.

August 2014

Chairman of the Japan
Chemical Industry Association

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Priority Themes in FY 2014

JCIA's Director General Speaks about Priority Themes in FY 2014



ICCA Board Meeting Held in Japan for First Time outside Europe and the United States

In May 2014, the International Council of Chemical Associations (ICCA) Board meeting was held in Japan; this was the first time for the meeting to be held outside Europe and the United States. The Board is the ICCA's highest decision-making body, and ever since the ICCA's founding in 1989, its meetings had been held on a rotation basis in Europe and the United States. One reason why it was held in Japan this time was that the center of gravity of the world's production of chemical products is shifting to Asia. Asia's share of production has now exceeded 50%, and the building of relations with Asia has become an important topic for European and US companies as well. Another reason is that Japan's activities in ICCA so far have received very high appraisal. JCIA has played an active role and displayed leadership in the ICCA's Climate Change and Energy Leadership Group and, regarding chemicals management as well, has energetically held capacity-building workshops in the emerging countries of Asia. The decision to hold the meeting in Japan was a manifestation of the ICCA's appreciation of these activities.

The seminar and symposium held in conjunction with the ICCA Board meeting were extremely meaningful too. As well as explanations of the ICCA's activities, there were speeches from top executives of leading global companies in the industry, and it was possible to publicize the activities of the JCIA not only to people in the industry but also to Japanese society as a whole.

Most Important Issue: Human Resource Development toward the Strengthening of Safety

At present, JCIA believes that the most important issue is safety. In FY 2013, we compiled "Safety and Accident Prevention Guidelines" and "Best Practices of Safety and Disaster Prevention, Industrial Health and Safety" and made efforts to disseminate them. On-site capabilities, in other words, human resource training, will be essential to further strengthen the activity for safety. By on-site human resources, I mean not only the people engaged in operations but all people working at the plant. After it has been built, a plant does not just continue in the same form for several decades. The products being manufactured may change, the materials and methods of operation may change, and the equipment itself may change. At such times, safety must also be considered. It is when continuity is interrupted that problems are likely to occur. In order to encourage training, JCIA has produced DVDs that can be easily understood by anyone and is making efforts to broadly disseminate safety education. We will continue to distribute these DVDs not only to members but to nonmembers as well. Furthermore, we hold industrial safety courses for safety managers jointly with other organizations of which members have large plants, such as the Japan Petrochemical Industry Association and the Petroleum Association of Japan.

Each company implements its own safety measures, but these have a limit. JCIA intends to provide many opportunities for companies to study how to use examples of past accidents and to learn about the safety efforts of other companies.

Establishment and Dissemination of Sustainability Package and Chemistry Day

From FY 2014, JCIA is taking account of medium-term priority themes in its business plans. For a start, in the current fiscal year we have taken up and are actively promoting two themes: "deployment of a Sustainability Package in Asia" and "enhancing the presence of the chemical industry."

Aimed at supporting Japanese companies operating in Asia, "deployment of a Sustainability Package in Asia" is an effort to package and supply locally the practice of Responsible Care and support infrastructure nurtured by JCIA over more than a decade in the areas of chemicals management and safety and environmental measures. Since it is easier for JCIA to build relations with national governments, industrial circles, and foreign companies, we intend to use these connections and expand them together with Japanese companies operating locally. Deployment has already begun in such countries as Thailand, Vietnam, and Indonesia.

The second theme is "enhancing the presence of the chemical industry." The chemical industry has a major role to play in the building of a sustainable society, but understanding of the chemical industry by society and citizens is not adequate. In order to foster understanding of the chemical industry's contribution to society, in cooperation with scientific societies and other organizations, we have designated October 23 as Chemistry Day and the week including October 23 as Chemistry Week and are currently making efforts to promote Chemistry Day and Week. In FY 2014, we are planning various activities including special lessons for junior and senior high school students, chemical experiment shows for children, and events at universities utilizing their open campuses and other facilities. We hope that young people actively participate in these events, deepen their interest in chemistry, and become aware of the enormous potential of the chemical industry.

Director General, JCIA

CLOSE UP 2014

ICCA Board of Directors Meeting, First Held in Japan

On May 29, 2014, the Board of Directors which is the highest decision-making organization of the International Council of Chemical Associations (ICCA) comprising the chemical industry associations worldwide held its meeting in Tokyo. This was the first time the Board meeting is held in Asia.

There are many challenging issues in the world, for example, population growth, food problem, energy issue, global warming, and others that require a global response beyond national boundaries. The chemical industry must play a significant role to solve these challenging issues in order to achieve a sustainable society, because the chemical industry provides materials, technologies, and products to every other industries.

ICCA engages in discussions on the opinions and policies from the industries concerned with the global challenging issues and offers opinions to the policy decision makers. In addition, ICCA promotes the voluntary initiative toward the thorough implementation of appropriate management of chemicals and products as well as the development of standards. The activities of ICCA are getting more important because making quick and correct judgments in response to the continuously changing world situation is required.

On this page, the resolutions made at the ICCA Board of Directors meeting are introduced and the "Special Seminar by JCIA" and the "ICCA Symposium" that were held taking advantage of the first meeting of the Board in Japan are reported and described.



ICCA Board of Directors Meeting

ICCA Board of Directors Meeting (on May 29, at Palace Hotel Tokyo)

Resolutions Made at the Meeting

At ICCA Board of Directors meeting, the top executives of the 15 world leading chemical enterprises gathered on this occasion and adopted the revised version of "The Global Charter of Responsible Care (RC)" (For more information, refer to page 14). The charter describes the more specific action strategies so as to make them more understandable for external stakeholders, and puts emphasis on "the greater contribution to sustainability" through the development and provision of innovative technology, and also gives directions for the enhancement of international management of chemicals. It has also been confirmed that the goal is to obtain the signatures of CEOs of the world's 150 top-ranking chemical enterprises

deploying business activities worldwide, by the beginning of 2015.

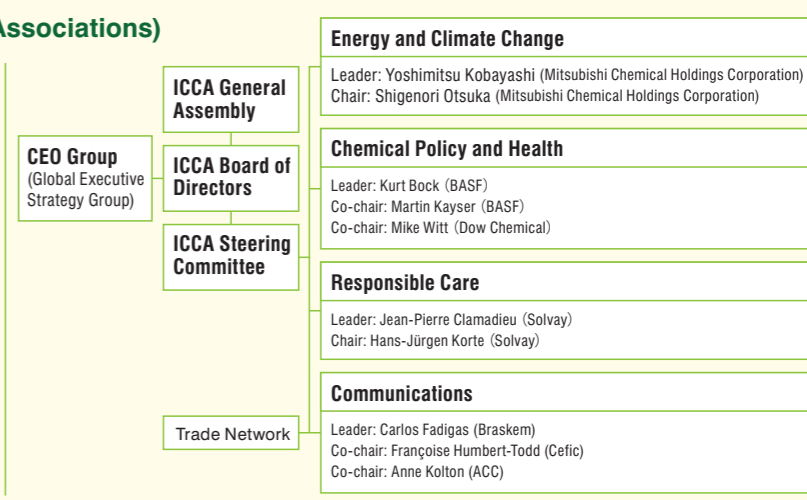
Two position papers related to energy and climate change have also been adopted. With respect to climate change, the new international framework for the reduction of greenhouse gases after 2020 is to be agreed at the COP 21 (Twenty-first Session of the Conference of Parties to the United Nations Framework Convention on Climate Change) to be held in Paris at the end of 2015. ICCA will state as many as possible of our opinions as representing the chemical industry at the local areas in advance to the COP 21 discussions.

Furthermore, it has been agreed that the "capacity building activities" for propagating the special knowledge for risk evaluation and proper management of chemical products and for developing capacity in the emerging countries and advancing countries, will be pursued in cooperation with the United Nations Environment Programme (UNEP*).

ICCA (International Council of Chemical Associations)

This organization was established by the chemical industry groups of the U.S., Europe, and Japan in 1989. The number of member countries and regions is approximately 50 including the chemical industry associations of North and South America, Europe, Asia, Oceania, and the Gulf countries and also including observer countries such as China, Russia, and India. Its scale becomes apparent from the gross sales amount of over 400 trillion yen in 2012. The chemical product sales of the ICCA member companies account for over 90% of the world total. Over 20 million persons are directly and indirectly hired worldwide. The ICCA thus contributes to the development of sustainable society through its engagement in voluntary and other activities of which "Responsible Care" is the most representative one.

The organization is comprised of four main leadership groups which implement and promote strategic initiatives toward the solution of challenging issues in the respective fields, and engage in communication, notably offering opinions to policy decision makers. For more information, refer to ICCA website. www.icca-chem.org





JCIA Special Seminar

JCIA Special Seminar (on May 28, at Nikkei Hall)

Introducing the Latest Activities of ICCA

At the special seminar held by JCIA, on the theme of "Sustainable Development and Relevant Industrial Actions," the four chairs and co-chairs for each of "Energy and Climate Change," "Chemical Policy and Health," and "Responsible Care" Leadership Groups (LG) introduced the progress of the respective initiatives and the latest activities. Approximately 400 persons gathered in the hall, including those from JCIA member corporations and organizations, authorities, and mass-media. It was a good opportunity to again recognize the height of interest shown with regard to the activities of ICCA.

RC in the Midst of Expansion



Dr. Korte

First, the chair of "Responsible Care" LG, Dr. Hans Jürgen Korte, gave a speech. Dr. Korte presented in figures the actual performance of the industry that has been improved by RC and introduced examples of the values and evaluations obtained through the activities for each of the countries concerned. In addition, he introduced the recent initiatives of technical support and capacity building in progress in the emerging countries of Asia and Africa, demonstrating the steady extension of the countries and regions practicing RC.

Necessity of Appropriate Chemicals Management Worldwide

Next, the co-chair of "Chemical Policy and Health" LG, Dr. Martin Kayser took the rostrum and explained the Global Product Strategy (GPS*) which is a major initiative as RC in the ICCA. Dr. Kayser insisted on the importance of appropriate management of the chemicals



Dr. Kayser

worldwide while introducing some tips for promoting GPS and referring to the guidance which is deployed in 8 languages. In addition, the BASF plan was also introduced with respect to risk assessment and disclosure to the general public.

As the same co-chair of "Chemical Policy and Health" LG, Dr. Michael Witt explained the cooperation by ICCA with UN organizations. Dr. Witt introduced the building of a collaborative relationship with UNEP in four areas such as human resource development related to the chemical safety, and construction of chemicals management system. Especially as a specific example, the progress of an



initiative aiming at safety management of chemicals at the main ports in Kenya and Ghana was introduced.

Chemistry Can Contribute Most to the Energy Saving among All Industries

Finally, the chair of "Energy and Climate Change" LG, Mr. Shigenori Otsuka took the rostrum and gave a speech on the "Chemical Industry as A Solution Provider." Mr. Otsuka presented how the chemical industry has the highest potential for contributing to the energy-saving among all industries demonstrating that chemical products are used in 96% of all the products in the world, and that the products and technologies that are provided by the industry can reduce energy consumption by 47% and greenhouse gas emissions by 50% by 2050.



Mr. Otsuka

ICCA Symposium (on May 29, at Palace Hotel Tokyo)

Discussions on the Future of Chemical Industry
ICCA Symposium was held on the same day ICCA Board of Directors meeting was held on the theme of "What Should Chemistry Aim at in 21st Century?"

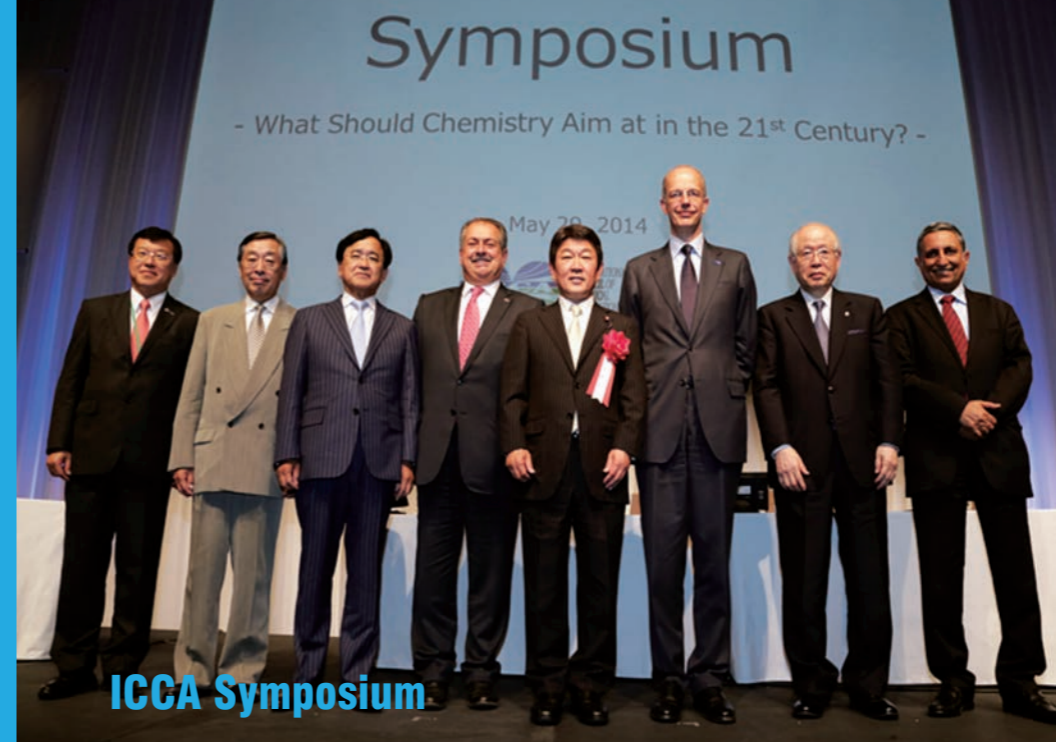
Approximately 400 persons gathered at this symposium, including top managers of JCIA member corporations and organizations, listening to the enthusiastic speech of the presenters on behalf of the "chemical industry."

Dr. Ryoji Noyori, President of RIKEN, Sending Cheers to Chemical Industry [Keynote Lecture]

Dr. Ryoji Noyori, President of RIKEN, a doctor and a winner of the 2001 Nobel Prize in Chemistry, marked a start of the symposium. JCIA asked Dr. Noyori to give a lecture titled "Chemistry Shapes Our Future" from the viewpoint of the representative of academia. After starting his lecture by saying that the opportunity he had of gaining an interest in chemistry was the starting point and by alluding to the charm and possibilities of chemistry "which can create value from nothing," Dr. Noyori elaborated, with a sense of giving encouragement to the chemical industry, on the challenging issues that Japanese chemical industry has to solve in order to achieve further growth of the industry and on the necessity of wisdom and preparation, collaboration and interaction across the borders of the various fields.



Dr. Noyori



ICCA Symposium

Messages from the World's Top-level Managers [Panel Discussion]

Next to the Dr. Noyori's lecture, a panel discussion was held by the top-level managers of the chemical manufacturers of Japan, the U.S., Europe, Middle-East, Thailand, and India. At the panel discussion, opinions on the challenging issues upheld by the chemical industry, the role which must be taken in the future, and on many other matters were proactively exchanged, thus confirming the importance of cooperation by the chemical industry worldwide and beyond national boundaries.

Possibilities of the Chemical Industry



Dr. Bock

At the beginning of the panel discussion, each of the three of top managers of Japan, the U.S., and Europe made speeches and expressed their own thoughts on the possibilities of chemistry and the role the industry has to assume for the realization of sustainable society. Dr. Bock: In the future global climate, it is necessary to consider the issues of "population growth and urbanization," "resources," and "food" and it is also important to embrace a commitment to solving the problems and to communicate the role and contribution to society.

Mr. Liveris: Non-conventional-type energy revolution, for example, shale gas, brings huge profit to the world economy. It is important to have collaboration with citizens and governments in addition to innovation through research and development in order to provide the solutions by making use of the power of chemistry which connects to all other fields and industries.



Mr. Liveris

Dr. Kobayashi: The number of the patent applications in the chemical industry accounts for 35% of the world total. It is only the chemical industry

[Panelist]

Dr. Kurt Bock / Chairman, BASF SE (President of the ICCA)
Mr. Andrew N. Liveris / President, Chairman & Chief Executive Officer, The Dow Chemical Company
Dr. Yoshimitsu Kobayashi / President & Chief Executive Officer, Mitsubishi Chemical Holdings Corporation (President of the JCIA)
Mr. Mohamed H. Al-Mady / Vice Chairman and Chief Executive Officer, SABIC
Dr. Pailin Chuchottaworn / President and Chief Executive Officer, PTT Public Company
Dr. Nikhil R. Meswani / Executive Director, Reliance Industries Limited

[Moderator]

Professor Hiroyuki Itami / Tokyo University of Science



←President & CEO Dr. Pailin, Professor Itami, President & CEO Dr. Kobayashi, Chairman & CEO Mr. Liveris, METI Minister Mr. Motegi, Chairman Dr. Bock, President Dr. Noyori, and Vice Chairman & CEO Mr. Al-Mady (from the left)

that will continue creating technological innovation on a revolutionary scale and contribute to human society at large in the future.

Securing Human Resource and Collaboration with Society are the Key

In the panel discussion, Professor Itami as a moderator presented two questions: "What can be the obstacle to the implementation of growth strategies for individual company?" and "What cooperation can be implemented by the chemical industry beyond national boundaries?", and then the panelists exchanged their own opinions with taking the national circumstances of their own into consideration.



Dr. Kobayashi

With respect to the first question, there were opinions such as "Understanding of the long-term investments made for innovation by the stakeholders" (by Dr. Bock), "To have dialog with the financial market and to foster a corporate culture responding to the rejuvenation of human resources" (by Mr. Liveris), "To secure human resources" (by Dr. Kobayashi), "Input (raw material) and output (strategy for the product and market), and inner (strategy for organization and human resource) balance" (Mr. Al-Mady), "Tenacity in obtaining operating licenses from society and rigid vocational education system" (Dr. Pailin).

With respect to the second question, some opinions were raised such as: "It will be necessary to focus on the development of human resources of younger age and, on chemical education, it will also be necessary to enlarge the collaboration network all over the supply chain, and it will be necessary also to attend the government's policy planning meetings as an important industry for the nation. Thereafter the panel discussion made it clear again that it is important to deepen the general public's understanding and the collaboration across the border of the fields in order to make innovation, and to promote human resource development and vocational education for the next generation with global collaboration.

After the panel discussion, Mr. Toshimitsu Motegi, Minister of Economy, Trade and Industry, took the rostrum as a guest encouraging all present to support the innovation of the chemical industry, and ended the symposium on a high note.

At the social dinner event held after the symposium, eminent persons from the economic, academic, and governmental spheres such as Mr. Hiromasa Yonekura, Chairman of the Federation of Economic Organizations, Mr. Sadayuki Sakakibara, Chairman of the Chemical Society of Japan, and Dr. Akira Suzuki, Dr. Eiichi Negishi, and Dr. Koichi Tanaka, all three being the winners of the Nobel Prize in Chemistry, participated in the dinner party for promoting international exchange.

*Position titles are given as of the date of holding the event.

Social Contributions of the Chemical Industry

As one of the key industries, the chemical industry contributes to society by supplying raw materials, synthetic materials, and so on to various industries. Housing, a familiar topic to all of us, is, on this occasion, presented as a specific example of the contribution made by chemistry.

Chemical products for a Net Zero Energy Green Building



Contribution by chemical industry

Many chemical products are used in a net zero energy green building



Nikka-chan: JCIA's official character

Insulation materials

Using insulation materials reduces the heat flowing into and out of house walls, ceilings, roofs, and floors, mitigating the cooler and heater loads.



Example of chemical products: polystyrene foam, polyurethane foam

Thermal insulating property

Reflective roof coatings and pigments

Applying paint materials or pigments raises the reflection rate of the roof material resulting in reducing the solar heat absorbed by the roof and the cooler loads.



Example of chemical products: Infrared reflecting pigments (titanium dioxide and the like), coating materials with high-reflection rate of sun light for roofs

Energy saving afforded by cool roof

Air barriers (house wraps)

High durability, vapor transmission, water-proof sheet used between exterior wall and insulation material prevents drop in durability due to moisture.



Example of chemical products: Polyethylene nonwoven fabric, polyester non-woven fabric

Moisture permeability, waterproof property, durability

Resin window sash

Used as a window insulation in order to reduce heat loss of coolers or heaters due to heat flowing into and out of the window of the house.



Example of chemical products: polyvinyl chloride sash

Thermal insulating property

Piping and insulation materials for piping

Using plastic piping of and insulation materials for piping with a low heat conductivity reduces heat losses of the hot water flowing in the hot-water supply pipe.



Example of chemical products: polyvinyl chloride piping, polyethylene piping

Thermal insulating property

Caulking materials, sealing materials

Exhibits remarkable functions in terms of waterproofness and airtightness by filling gaps or cracks in buildings



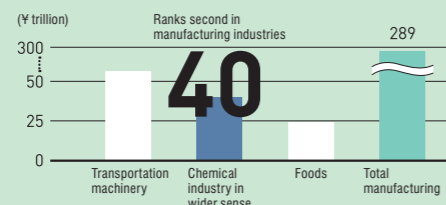
Example of chemical products: silicone type, polyurethane type

Waterproof property and airtightness

With the cooperation of: Japan Paint Manufacturers Association, Vinyl Environmental Council, DuPont-Asahi Flash Spun Products Co., Ltd., SEKISUI CHEMICAL CO., LTD., and Shin-Etsu Chemical Co., Ltd.

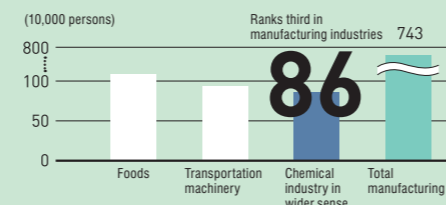
Outline of Chemical Industry of Japan (by Graphs)

Value of Shipment (2012)



Source: Ministry of Economy, Trade, and Industry, [Census of Manufactures]
Note: The chemical industry in wider sense refers to a combination of the chemical, plastic product, and rubber product industries

Number of Employees (2012)



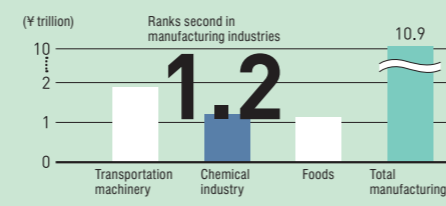
Source: Ministry of Economy, Trade, and Industry, [Census of Manufactures]

Amount of Value (2012)



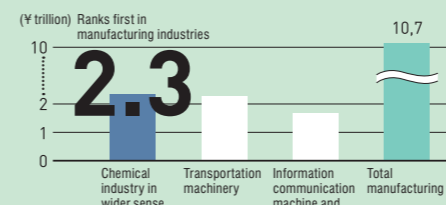
Source: Ministry of Economy, Trade, and Industry, [Census of Manufactures]
Note: Added Value = Production amount—Cost for using raw materials—Domestic consumption tax—Depreciation cost

Capital Investment (FY 2012)



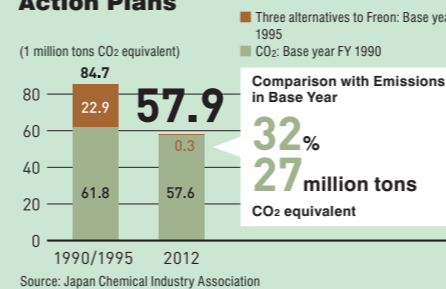
Source: Ministry of Finance, [Financial Statements Statistics of Corporations by Industry]

R&D Expenditures (FY 2012)



Source: Ministry of Internal Affairs and Communications, [Science technology research and survey]

Achievement in Reduction of Greenhouse Gas Emissions through the Chemical Industry's Voluntary Action Plans



Source: Japan Chemical Industry Association

JCIA at a glance

Name: Japan Chemical Industry Association (JCIA)
Established: April 1948—JCIA formed as a voluntary association
 June 1991—Incorporated as a legal entity
 April 2011—Shifted to a general incorporated association
Mission: As the leading trade association of the Japanese chemical industry, JCIA seeks to promote the healthy development of the chemical industry through the research and study of production, distribution and consumption of materials relating to the chemical industry. JCIA also focuses on the research and study of various issues relating to technology, labor, environment and chemical safety of the industry, and on planning appropriate measures and actions to the economic prosperity of Japan and the betterment of the national standard of living.
Activities:

1. Research and study on the production, distribution and consumption of chemical products.
2. Research and study on issues concerning technology, labor, environment, chemical safety, etc., as well as planning and promoting measures and actions.
3. Commendations for outstanding achievement in new technologies and safety records.
4. Collection and dissemination of information, communications and cooperation with related organizations in Japan and overseas.
5. Public outreach and advocacy activities, workshops and seminars.

Committees: Policy Coordinating Committee, Councilors' Committee, Public Relations Committee, International Activities Committee, Economy and Tax System Committee, Labor Committee, Technical Affairs Committee, Environment and Safety Committee, Chemicals Management Committee, Responsible Care Committee
Fiscal year: From April 1 to March 31 of the following year
Number of members: 177 companies and 79 organizations (as of July 1, 2014)

Special Topic I Chemicals Management Initiative

Aiming at the Sustainable Development of Chemical Industry through Chemicals Management at the Global Level



Preparation and publication of “GPS/JIPS Safety Summaries” reflect corporate attitude towards chemicals management

Executive Director, JCIA
Ph.D. in pharmacology

Fumiaki Shono

International trend related to chemicals management

With “World Summit on Sustainable Development (WSSD)” which was held in Johannesburg in 2002 as a turning point, today’s chemicals management is based on the agreement aiming that by 2020, chemicals are produced and used in ways that minimize significant adverse effects on human health and the environment, taking into consideration that precautionary principle using risk assessment and management methods based on transparent science. A “Strategic Approach to International Chemicals Management (SAICM)” has therefore been developed resulting in a clear paradigm shift from hazard-base management focusing only on conventional chemical substance-specific hazards to a risk-based management based on scientific methods. Under these trends and moves, both of government and private sector are developing various measures and JCIA is conducting various activities to support its members to solve the challenging issues encountered.

Development and promotion of GPS/JIPS activities

Chemical industry is proactively promoting Responsible Care (RC) activities and Global Product Strategy (GPS) led by the International Council of Chemical Associations (ICCA), to which JCIA belongs.

GPS is one of the voluntary initiatives to minimize the risk of the chemical products in the whole supply chain through the disclosure of information on safety, risks, and management method to the benefit of the general public as well as to conduct risk evaluations by corporations for their chemical products and proper risk-based management. The “Risk Assessment Guidance” has been established and published for the purpose of promoting such voluntary initiatives.

JIPS* (Japan Initiative of Product Stewardship) is the Japanese version of GPS. It discloses the information to the general public including customers by uploading the information in the form of “GPS/JIPS Safety Summaries” to ICCA website of

“GPS chemicals portal.”

JCIA rolled out a GPS/JIPS promotion campaign from November 2013 to April 2014, as a result the number of Safety Summaries has reached to a record of a total of approximately 350 issues uploaded by Japanese companies so far encouraging expectations of a further increase in the number of uploads in the



Disclosing the “JCIA BIGDr” website which is the comprehensive support site for chemical substance risk assessment

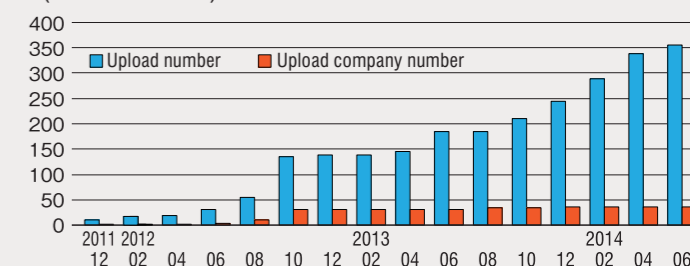
In order to support the GPS/JIPS activities of JCIA’s members, the comprehensive supporting website of “JCIA BIGDr” has been developed and the initial version was released in August 2013 to JCIA’s members, giving suggestions for the stronger promotion, for example the collection of the various types of information for the risk assessment and the method for preparing safety summaries and others.

In the future, the various functions of BIGDr will be enhanced for the purpose of providing proper advice and support to users, and the system will be updated so as to incorporate the views of the members. Review and discussion will be made with a view to releasing “JCIA BIGDr” to the public within FY 2014.

future.

The entire chemical industry is promoting GPS/JIPS and aiming the achievement of WSSD 2020 goal through risk reduction in the whole life cycle from the manufacturing of chemical products to the disposal of waste.

<Trend of GPS/JIPS safety summary uploaded (as of June 2014)>



<JCIA BIGDr>

- Function-1 Hazard and regulatory information search
- Function-2 Browse of safety summaries
- Function-3 Automatic preparation tool for safety summary
- Function-4 Reference materials
- Function-5 Links
- Function-6 Help

JCIA BIGDr Ver2.0

BIGDr: The Base of Information Gathering, sharing & Dissemination for risk management of chemical products
BIGDr: an infrastructure system which collects, shares and transmits information for comprehensive support of company’s chemicals management

Promoting the scheme of “Information communication” in the supply chain

The “SCRUM project*” (Project of Supply chain Chemical Risk management and Useful Mechanism discussion) has been launched through the collaborative work with the Joint Article Management Promotion-consortium (JAMP*) from the viewpoint of “management of chemicals in products” for the purpose of sharing the chemical risk information with cross-sectional industries. Their activities have been promoted to establish a scheme for sharing risk information on chemical substances throughout the supply chain from the manufacture, use, and discarding of the chemical products and to propagate the scheme. In October 2013, “The draft guideline for the risk management of chemical substances in the supply chain (1st edition)” has been developed and published for the implementation of risk management of chemical substances through the supply chain and for its propagation.

On the other hand, Ministry of Economy, Trade, and Industry has launched the “new project to study regarding chemical substance regulations and the deployment of

Japanese corporations to Asian countries” in May last year, and various types of discussions were made on the concept of the communication scheme for the chemical substances contained in products through the supply chain, and their concept has been summarised. JCIA participated in the project as one of the members.

JCIA promotes the further activities for aiming the achievement of WSSD 2020 Goal under a government-private partnership.



<Global progress of chemicals management and its challenge>

- 1992 United Nations Conference on Environment and Development Agenda 21 (Rio Declaration)**
- 2002 World Summit on Sustainable Development (WSSD)**
 - Global goal: By 2020, chemicals will be produced and used in ways that minimize significant adverse impacts on the environment and human health.
 - Development of SAICM (Strategic Approach to International Chemicals Management)
- 2006 International Conference on Chemicals Management (ICCM*)**
 - Adoption of SAICM

Goals:

- To enable chemical substances to be used safely throughout their entire life cycle
- To check the safety of chemical substances by risk assessment on the basis of scientific evidence
- To disclose the safety data and risk evaluation data as much as possible

Regulations and Activities:

- Laws and regulations on chemicals management:** Europe: REACH; Japan: Amendment of Chemical Substances Control Law, Amendment of Industrial Safety and Health Law; China, Korea, Taiwan, etc.: Tightening of regulations; The U.S.: Consideration of amendment of TSCA.
- Activities in the chemical industry:** ICCA, JCIA.
- Industry-cross-sectional activities:** JAMP.

Other Initiatives: GPS/JIPS Product Stewardship-based chemicals management; Development of a mid- and long-term vision; Introduction of information communication necessary for risk management from 2015.

Special Topic II

JCIA's Safety and Disaster-Prevention Efforts

We need to make further efforts to firmly establish the activity for keeping security and prevention of industrial accidents



Promotion of utilizing “Safety and Accident Prevention Guidelines” and “Best Practices of Safety and Disaster Prevention, Industrial Health and Safety,” and rollout of new measure

Executive Director, JCIA
Yutaka Haruyama

Establishment and diffusion of guidelines, and implementation of follow-up survey

In the recent 10 years, the accidents have kept on increasing. Especially, serious accidents have occurred at chemical plants last year and the year before. Based on its understanding that ensuring security and safety is the paramount issue for the chemical industry, JCIA has embarked on various efforts.

As a specific effort to prevent recurrence of serious accidents, JCIA has compiled “Safety and Accident Prevention Guidelines”^{*} and distributed them over 250 member companies and organizations as part of the implementation of usage diffusion.

Furthermore, we have confirmed its utilization status and have conducted a follow-up survey from January to March this year in order to link the utilization status to the progress of security and safety activities. As a result, we found that approximately 75% of the member companies that responded to the questionnaire survey thoroughly understood the objectives of the guidelines and committed themselves to the observance of safety and accident prevention up to the top management. We have confirmed the existence of a high level of awareness among the member companies with regard to safety and disaster prevention by the above facts.

In the course of this survey, we collected many opinions and requests from the members as below:

- It is necessary to provide the reference material for the interpretation of important check item points and the reason of their settings in order to enhance the utilization of the guidelines.
- It is preferable to share the information based on the specific utilization examples by other member companies.
- It is preferable to compile the guidelines in a form that can be utilized as training and job education material from the viewpoint of technology transfer and human resource development.

In responding to the requests above, we included specific measures in the activity plan this fiscal year (FY 2014) as new projects and measures.

^{*}JCIA established the Safety and Accident-Prevention Study Working Group in view of the fact that a series of serious accidents had occurred, and compiled guidelines based on thorough investigations of the accident examples via the cooperation by deeply-interested industrial groups and experts.

Creation of new training and vocational education materials and instituting a course of lectures responding to the opinions and requests stated by members

With a view to the preparation of training and instruction materials, we established the discussion group and published summaries in video form (DVD) in July this year and distributed to all member companies, so that activities can unfold in the various chemical plant sites.

We have provided these video training and instruction materials for the educational courses conducted by the Sanyo Association for Advancement of Science & Technology, a public interest incorporated association.

Moreover, in order to promote safety education in the chemical industry, a course of lectures titled “Industry safety theory”^{*} will be launched in the second half of this year in conjunction with the Japan Petrochemical Industry Association and the Petroleum Association of Japan, and JCIA will improve member companies’ security capability through the development of human resources in the top management echelon and managers who have an understanding of the safety required in the industrial field in the future, and safety experts with a broad view.

^{*}The course focusing on the establishment of an industry-wide lecturing and discussion system by inviting persons from the government, academic, and industrial fields as a circle of the enforcement of security education. The course will be utilized as a place of communication and human resource and information exchange. 15 times of courses will be conducted during the period from October 2014 to February 2015. Target will be upper management candidates in charge of safety at the member companies of JCIA, the Japan Petrochemical Industry Association and the Petroleum Association of Japan (For maximum of 30 attendants).

▶ **Safety and Accident Prevention Guidelines (First edition) (April, 2013)**



▶ **DVD “Learning from accident examples” (July, 2014)**



Sharing best practices and expansion of the range of the use of them from the viewpoint of “Security Capability”

JCIA has implemented the award of safety prizes for 37 years, and summed up precedents of prize awards bestowed for “no-accident and no-disaster in the actual workplace” activities in the past from the viewpoint of the security capability in the form of a “Best Practices of Safety and Disaster Prevention, Industrial Health and Safety” which was put forward by the Japan Society for Safety Engineering (JSSE)(Japan Safety Competency Center). This summary of best practice precedents is used not only by the members of JCIA but also at the various work sites.

In addition, JCIA has rolled out the utilization of the best practice precedents on a broad front, focusing on the viewpoint of enhancing the on-site security capability in conjunction with JSSE.

Also in this fiscal year, JCIA will roll out activities based on the basic policy of “Safety enhancement and proactive horizontal rollout” while the activities that have been carried out until last fiscal year will be continued.

▶ **“Best Practices of Safety and Disaster Prevention, Industrial Health and Safety” (September, 2013)**



<Extract from “Best Practices of Safety and Disaster Prevention, Industrial Health and Safety”>



JCIA Symposium 2014 held on the theme of “Safety and Disaster Prevention”

JCIA held the “JCIA Symposium 2014” in the Keidanrenkaikan Hall on June 2, 2014.

The theme of this year was “Safety and Disaster Prevention.” General comments were given to each of the prizes awarded by JCIA (Safety Award, RC Award, and Technology Award) followed by speeches by the award winners and special speeches on the theme of safety and disaster prevention, as well as panel discussions were conducted. Two special speeches were made by Mr. Yoshiyuki Tanaka, the President of DuPont K.K. and by Mr. Takashi Matsushita, Director, Managing Executive Officer & General Manager of IDEMITSU on the theme of “What does the safety mean for DuPont?,” and “Safety at IDEMITSU,” respectively, while the panel discussion on the theme “Safety from the Management Perspective” was chaired by Mr. Masamitsu Tamura, Professor Emeritus of Tokyo University as the moderator, and two award winners who made special speeches and Mr. Yutaka Haruyama, Executive Director of JCIA as panelists. In addition, a social gathering was held after the completion of the symposium for the purpose of deepening communication and exchange.

^{*}Position titles are given as of the date of holding the event.



Responsible Care (RC)

What is Responsible Care?

The chemical industry is committed to the safe, responsible, and sustainable management of chemical substances by all companies handling chemical substances in every process, from the development, manufacture, distribution, and use of chemical substances to disposal and recycling after final consumption. Responsible Care means voluntarily preserving environment, safety, and health, publishing the results of activities, and engaging in dialogue and communication with society in order to realize this commitment.

The guiding principles of Responsible Care

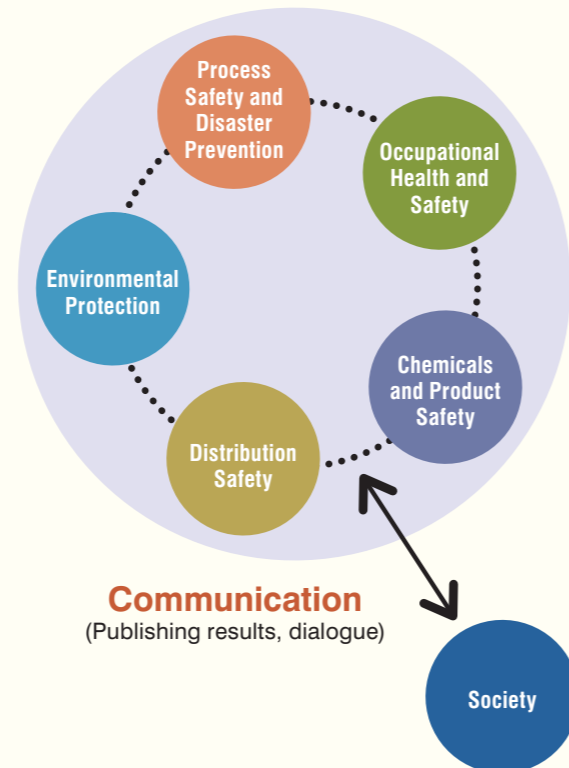
The Responsible Care Global Charter stipulates the guiding principles set by the International Council of Chemical Associations (ICCA) for the development of the Responsible Care Initiative. Member companies conduct activities on the basis of this charter.

In 2014, the RC Global Charter has been revised to be simpler and as specific action strategy reflecting the changes of the priority measures since its establishment. Upon revision of the Charter, CEOs of the member companies are requested to re-sign it in order to enhance awareness of RC and its worldwide implementation.

Implementation of Responsible Care (commitment to better safety, environment, and health)

Together with member companies, the RC Committee makes efforts to achieve the following five goals. It also promotes communication with society by publishing the results of activities.

Environmental Protection
We shall protect peoples' health and nature around the world.
Process Safety and Disaster Prevention
We shall endeavor to prevent industrial accidents and adopt measures against natural disasters.
Occupational Health and Safety
We shall protect the safety and health of working people.
Chemicals and Product Safety
We shall clarify the properties and handling procedures of chemical products and protect the safety, health, and environment of all handlers, including customers.
Distribution Safety
We shall endeavor to prevent accidents and disasters in distribution.



Revision of Responsible Care Global Charter

Major Points of Revision

- 1) Specific "action strategy" has been clearly stated in "theory and concept" mainly described in the old Charter.
- 2) Progress on chemicals management has been integrated.
→ Safety management for chemical products through science-based methods and risk assessment.
As a specific method, GPS is promoted.
In addition, GHS* and LRI* are positioned as a safety ensuring and information providing means regarding chemical products.
- 3) Greater contribution to process safety and the enforcement of security measures against terrorism and cyber-attacks has been integrated.
- 4) Contribution of the chemical industry to sustainable development with a view to achieving the goal of WSSD 2020 has been clearly stated.
- 5) The message has been simplified for easier understanding by external stakeholders (International organizations, international/domestic NGOs, and others).

Schedule

May 2014: To finalize the draft revised Charter at ICCA Board of Directors, and to decide future plans
June 2014 and after: To ask for CEOs (or presidents) of the companies belonging to the respective ICCA member associations to sign the revised Charter
June 2015: To release the revised Charter as a means for the chemical industry to make a contribution to the attainment of the goal set for 2020, and to conduct the publication event of the revised RC Global Charter in order to publicize at ICCM-4 (in September 2015)

Responsible Care Global Charter (2014 revised version)



Topics of Responsible Care Activities in FY 2013

In FY 2013, JCIA has committed itself, as priority matters, to continual improvement of RC implementation and the degree of social awareness and to geographical expansion of RC through the support to the activities in Asian countries.

- Hosting the members' exchange meetings: Osaka in July, Fukuoka in September, and Tokyo in February
- Upgrading RC award: Establishment of RC award judging committee. Categorization of RC awards into RC grand prix award, outstanding award, and award for effort
- Preparation of JCIA's annual report and reference materials, and hosting the meetings for reporting RC implementation status (In Tokyo and Osaka in December)
- Supporting the local dialog meetings: in 7 areas (Yamaguchi-nishi, Kawasaki, Sakai & Senboku, Iwakuni & Ohtake, Oita, Toyama & Takaoka, Niigata-kita)
- Supporting the individual dialog meetings, organizing risk communication workshops and dialog meetings with consumers
- Collaboration with RCLG: review of the reporting criteria of process safety incidents (process safety metrics) for process safety improvement



Award winners who made lectures in JCIA Symposium 2014 (June 2014, Tokyo)

The 8th Responsible Care Awards

Awards:	Members:	Awarded themes:
Responsible Care Grand Prix Award	Nissan Chemical Industries, Ltd.	Preservation of Biodiversity by Utilizing Biotope
Responsible Care Outstanding Award (Special Recognition Award)	Asahi Glass Co., Ltd.	Safety Reinforcement Activity Aiming at Improvement in Effectiveness of Risk Assessment and Fostering Human Resources for Safety
	Otsuka Chemical Co., Ltd.	Expansion of EHS Education by Establishing Safety Dojo
Responsible Care Outstanding Award	Showa Denko Ceramics Co., Ltd.	Work to Make Industrial Waste Landfill to Zero
	Sumika Bayer Urethane Co., Ltd.	Disaster Prevention & Labor Safety
	Kao Customer Marketing Co., Ltd.	Promotion of Direct Environmental Communications Activity
Responsible Care Award for Effort	JNC Fibers Corporation	Co-existence between Community and Corporation through Water
	Kaneka Corporation	Establishment of a Framework to Decrease Production Loss Utilizing Integration Power through Introduction of Material Flow Cost Accounting (MFCA)
	Mitsubishi Chemical Corporation	Improvement in Managing Plant Drainage
	Nippon Kayaku Co., Ltd.	Activity of Disaster Prevention at Nippon Kayaku Asa Plant
	Sumitomo Chemical Co., Ltd.	Enhancement in Communications with Community centering on RC Community Dialog in Oita Region

FY 2013 Achievements and FY 2014 Activity Plan

Summary of Activities

In accordance with its objectives of realizing the sound development of the chemical industry and thereby contributing to the prosperity of the Japanese economy and improvement of people's lives, JCIA promotes activities focusing on dissemination of the Responsible Care (RC) initiative and the achievement of goals stipulated by theme in three activity areas.



Activity	Main implementation items in FY 2013	FY 2014 activity plan	Results (Objectives)
Dissemination of Responsible Care initiative	<ul style="list-style-type: none"> ○Implementation of RC award lectures at JCIA Symposium 2013, and establishment of a RC Grand Prix Award, RC Outstanding Award, and RC Award for Effort for FY 2014 ○Supporting of regional dialog meetings and consumer dialog meetings ○Preparation of revised proposal for the Global Charter of RC as a task force member in the RC Leadership Group 	<ul style="list-style-type: none"> ○Continuous improvement of RC activities and promotion of social recognition ○Expansion at the base for RC activities by providing support for activities to the Asian countries, including development of Sustainability Package etc. 	
Safety and Environment			
Efforts concerning safety and disaster prevention, industrial safety and health, and environmental issues	<ul style="list-style-type: none"> ○Explanatory meeting regarding the "Safety and Accident Prevention Guidelines" and propagation (follow-up) activities ○Issuance of "Best Practices of Safety and Disaster Prevention, Industrial Health and Safety" 	<ul style="list-style-type: none"> ○Promotion of safety and accident-prevention measures ○Promotion of efforts to address environmental and safety problems 	<div style="background-color: #f4a460; border-radius: 50%; padding: 20px; text-align: center; width: 100px; margin: 10px auto;"> Building up trust from the members </div>
Chemicals management	<ul style="list-style-type: none"> ○Collection, analysis, transmission of information on domestic and overseas restriction trends, summary of member opinions, and giving advice to the administrative authorities ○Promotion of the JIPS and SCRUM projects ○Development and starting of operation of the risk assessment supporting system, "JCIA BIGDr" 	<ul style="list-style-type: none"> ○Enhancement of the support for the chemicals management work in members' business operations ○Further enhancement and expansion of voluntary activity in the industry mainly by GPS/JIPS 	
Technology and Human Resource			
Efforts on prevention of global warming and dissemination of cLCA*	<ul style="list-style-type: none"> ○Summarizing of the results achieved in the fiscal year (FY 2012) of "Environment Voluntary Action Plan" ○Starting of activities under "Commitment to a Low-carbon Society" ○Drawing up of cLCA global guideline and issuance of "the 3rd edition of the cLCA report" 	<ul style="list-style-type: none"> ○Commitment to a Low-carbon Society: reporting on the FY 2013 performance results ○Dissemination of cLCA 	<div style="background-color: #f4a460; border-radius: 50%; padding: 20px; text-align: center; width: 100px; margin: 10px auto;"> Improvement of the presence of the chemical industry </div>
Human resource development, chemical education, and enlightenment	<ul style="list-style-type: none"> ○Instituting of the working group for gender equality ○Fostering Program of Human Resources in Chemistry: holding of events for Research presentation meeting and introducing examples of activities by doctor-degree holders, and holding of student-company exchange meetings ○Continued implementation of "Dream Chemistry-21" events* and their enhancement including Chemical-experiment show for children in summer vacation ○Continued implementation of the Chemical Risk Forum as a learning program for the training and vocational education for personnel engaged in risk management, and examination of reconstruction based on members' needs 	<ul style="list-style-type: none"> ○Development of the Fostering Program of Human Resources in Chemistry, holding the seminars for development of the staff responsible for personnel/labor affairs and response to labor related policy ○Continuation and enhancement of the "Dream Chemistry-21" campaign project ○Enhancement of the Chemical Risk Forum 	
New LRI support activity	<ul style="list-style-type: none"> ○Adoption and promotion of 20 subjects as challenging issues for research consignment ○Implementation of results reporting events, and proactive introduction domestic and overseas 	<ul style="list-style-type: none"> ○Implementation and strengthening of the New LRI's organization and its operation and proper management of research consignment ○Effective communication of research policies and plans, the state of activities, and research results 	
Messages to Society			
Public relations activities	<ul style="list-style-type: none"> ○First publication of JCIA annual report ○Transmission of information to the members on Publication Relation Network etc. ○Press release on JCIA activities 	<ul style="list-style-type: none"> ○Publicity and Promotion of the "Chemistry Day" ○Transmission of the various types of activities by JCIA domestically and overseas 	
International activities	<ul style="list-style-type: none"> ○Issued proposals from the chemical industry regarding Economic Partnership Agreement (EPA) and Free Trade Agreement (FTA) negotiations ○Participation in and support for ICCA activities ○Strengthening of relations with related organizations in Asian countries through collaboration and consultation, and providing support ○Implementation of seminars and other events related to the challenging trade issues 	<ul style="list-style-type: none"> ○Efforts to the international trade issues ○Supporting Japanese affiliated companies overseas 	
Tax system lobbying	<ul style="list-style-type: none"> ○Putting together the demands related to the FY 2014 tax reform, and making approaches to the administrative authorities ○Instituting of economic strategy section meetings 	<ul style="list-style-type: none"> ○Demands and proposals on tax reform, deregulation, subsidies, etc. in response to moves by the administrative authorities to develop a growth strategy 	

Specific activity performance list (From August 2013 to July 2014)

<ul style="list-style-type: none"> • ICCA Symposium • JCIA Symposium • JCIA Special Seminar (4 times/year) • JCIA Regular Seminar (6 times/year) 	<p>[Technology and Human Resource]</p> <ul style="list-style-type: none"> • Dream Chemistry-21 "Children's science experiment class" (6 times/year) • Chemical-experiment show for children in summer vacation 2013 • Chemical-experiment show for children (in Morioka, Kobe, Fukushima) • Selection of the winners and award ceremony for "Chemistry Grand Prize" • International Chemistry Olympiad Japan team send-off party • Plant tour for study groups of science teachers at junior high schools in Tokyo • Seminar for science teachers in junior high and high school (3 times/year) 	<ul style="list-style-type: none"> • Fostering Program of Human Resources in Chemistry: holding of events for Research presentation meetings and introducing examples of activities by doctor-degree holders, and holding of student-company exchange meetings (in Tokyo and Osaka) • Eco-products 2013 • Kansai area follow-up explanatory meeting for the BIGDr users • New LRI annual meeting • FY 2013 QSAR seminar on chemicals management (2 times/year) • Chemical Risk Forum (10 times/year) • GPS/JIPS seminars, workshops, and explanatory meetings (5 times/year) 	<p>[Messages to Society]</p> <ul style="list-style-type: none"> • China chemicals management liaison meeting, the 1st seminar • Japan reconstruction strategy, —JAPAN IS BACK— explanatory meeting • Risk communication training • Chemical industry and chemicals management workshop in Vietnam • Lectures on propagation related to the standardization (The 3rd time in FY 2013) • Lecture made by public relations department • Explanatory meeting for members (4 times/year) 	<ul style="list-style-type: none"> • FY 2014 Explanatory meeting related to a broad outline of tax reform • Explanatory meeting on the rules and regulations in the countries/regions of origin • Anti-dumping lecture (3 times/year) • International standardization workshop • Responsible Care-related: activity reporting meeting, consumer dialog meeting (2 times/year, respectively), membership communication exchange meeting (3 times/year), regional dialog meeting (7 times/year) • Issuance of Responsible Care News (in February, May, August, and November) 	<ul style="list-style-type: none"> • Issuance of "Addressing the Avoided Emissions Challenge" • Issuance of the 3rd "Life Cycle Analysis of Chemical Products in Japan and around the World" • Leaflet "Chemical Industry of Japan 2014" (by Graphs) • Leaflet "Annual Report 2013" <p>[Capacity building in Asia]</p> <ul style="list-style-type: none"> • In Thailand, Vietnam, Singapore, Indonesia: 3 times for each • In Malaysia, Cambodia, Laos: once for each
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JCIA's Activities

Safety and Environment

▶ Safety and Disaster Prevention

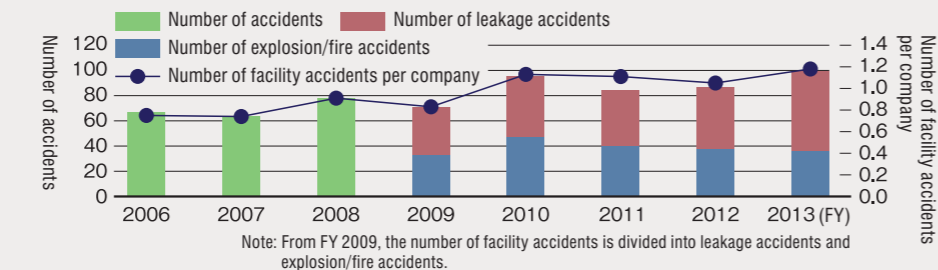
Based on its understanding that ensuring security and safety is the paramount issue for the chemical industry, JCIA has issued the "Safety and Accident Prevention Guidelines" summing up the accident prevention measures learned from recent accidents at chemical plants and made efforts to explain and diffuse them to JCIA member companies and parties. In addition, we have conducted follow-up survey in order to respond specifically to the requests made by the members during the execution of the survey in an attempt to establish reference materials for training and vocational education.

*For further details, please refer to Reference Materials on JCIA's website.

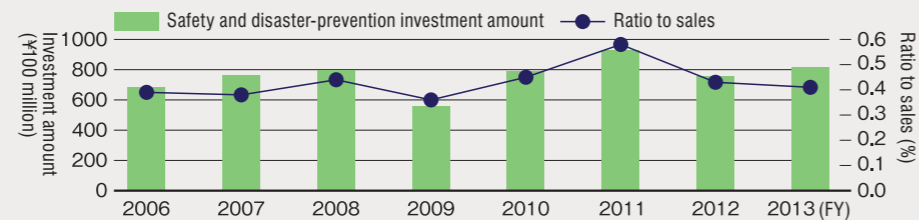
▶ Industrial Health and Safety

With respect to the "Industrial health and safety," JCIA understands the status of investigation of the examination items set forth in the 12th Industrial Accident Prevention Plan at the Health and Safety Subcommittee of the Ministry of Health, Labor and Welfare's Labor Policy Council and the trends with regard to regulatory restrictions, and intends to give support notification to the respective member companies of JCIA and to a speedy response thereto. Moreover, JCIA awards the prize to companies that have produced superior safety results and holds safety symposia every year focusing mainly on examples announced by the prize winners. Furthermore, the contents of the activities of companies

▶ Facility Accident Occurrences (Explosion, Fire, Leakage, etc.)



▶ Investment in Safety, Security, and Disaster-Prevention Measures

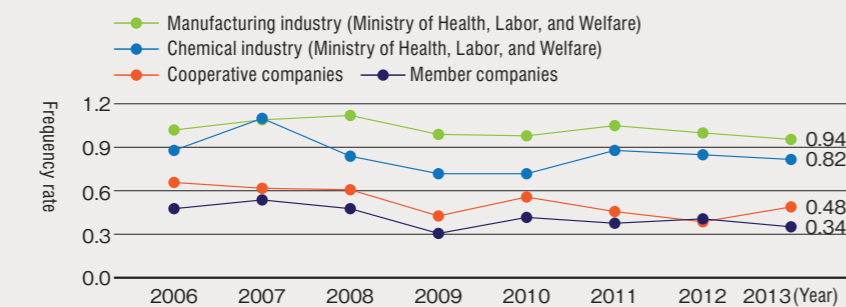


that have been awarded safety prizes in the past were summed up and published in the form of a "Best Practices of Safety and Disaster Prevention, Industrial Health and Safety" in FY 2013.

*For further details, please refer to Reference Materials on JCIA's website.

▶ Frequency Rate Trends

Frequency rate = $\frac{\text{Number of accident victims requiring absence from work}}{\text{Total working hours (per one million hours)}}$



▶ FY 2013 JCIA Annual Safety Award Grand Prize and First Prize Winners

- Grand Prize**
Kao Corporation: Tochigi Plant
- First Prize**
Showa Aluminum Can K.K.: Hikone Plant
Showa Denko K.K.: Chichibu Plant
Teijin DuPont Films Japan Limited: Gifu Plant
Nippon Kayaku Co., Ltd.: Pharmaceutical Research Laboratories, Research and Development Group*
- *Safety Effort Award Special Prizes

▶ Award winners who gave lectures at the Safety Symposium (June 2014, Tokyo)



▶ Industrial Waste Reduction

JCIA endeavors to gather and reflect the opinions and demands of member companies concerning study groups, collected materials, and moves toward legislative revisions relating to the environment conducted by the administrative authorities or other domestic or international organizations. Aiming to build a recycle-oriented society that curbs the consumption of resources and protects the environment, JCIA member companies make efforts to reduce the volume of industrial waste and final disposal by reviewing raw materials and production processes and promoting retrieval and reuse. JCIA keeps track of their achievements.

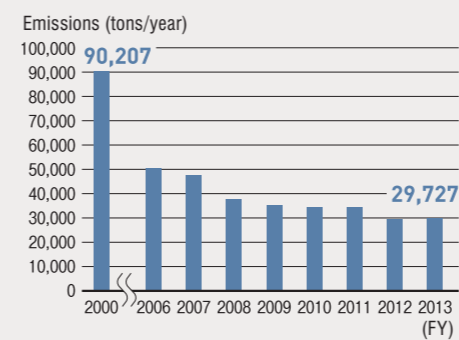
*For further details, please refer to Reference Materials on JCIA's website.

▶ Reduction of Chemical Emissions

JCIA member companies are making efforts to prevent atmospheric, water, and soil pollution by improving disposal technology and conducting positive capital investment. Significant results have been achieved in the reduction of

▶ VOC Emissions

(The JCIA's interim report figures for FY 2013)



Activated sludge treatment facility prevents sea and river pollution by detoxification of factory effluents.

*For further details, please refer to Reference Materials on JCIA's website.

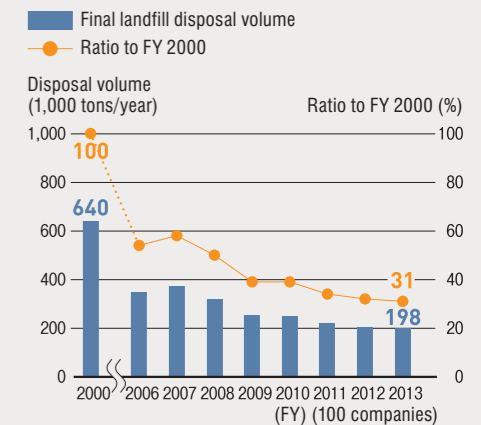
▶ Industrial Waste Volume and Effective Resource Utilization Ratio

(The JCIA's interim report figures for FY 2013)



▶ Final Disposal Volume

(The JCIA's interim report figures for FY 2013)

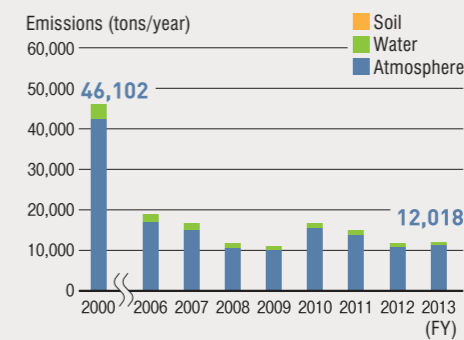


chemical substance emissions, including the reduction of volatile organic compound (VOC*) and PRTR* substances. JCIA keeps track of their achievements.

The graphs below show atmospheric,

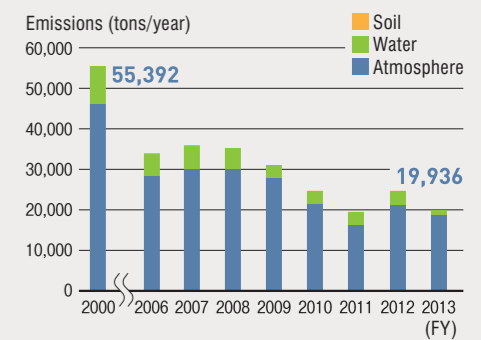
▶ Emissions of PRTR Substances

(The JCIA's interim report figures for FY 2013)

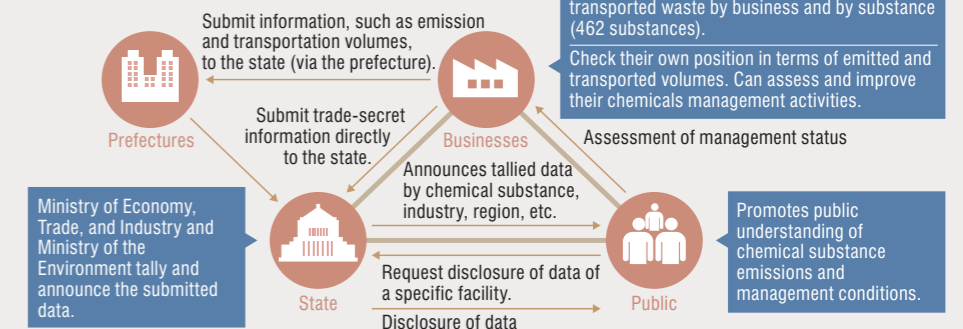


▶ Emissions of Voluntarily Surveyed Substances

(The JCIA's interim report figures for FY 2013)



▶ About PRTR (quoted from the website of Ministry of Economy, Trade and Industry)



*Data of individual businesses have been available on the website since FY 2008 (quoted from the METI website).

▶ Prevention of Global Warming

With respect to the “Environment Voluntary Action Plan” (from FY 1997 to FY 2012) related to the energy saving, energy consumption reached an average of 85 for 5 years from FY 2008 to 2012 (the base index is set to 100 in FY 1990), and the activities have been completed. The “Commitment to a Low-carbon Society” activities were launched in FY 2013 and the emission reduction was determined based on the CO₂ emission in case of BAU (Business As Usual) as the target value, with the base year being FY 2005.

The reduction of greenhouse gas emissions (CO₂ and three alternatives to

▶ Chemicals Management

JCIA's activities related to chemicals management are mainly:

- ① Supporting JCIA's members in the matters of regulations and institution related to the chemicals management
- ② Rollout of the voluntary activities related to the chemicals safety
- ③ Promoting research/new technology evaluation etc. to support the above (1) and (2) as basic activities.

In particular, the following activities are being rolled out:

• Investigation, analysis and reporting of the regulations related to chemicals in Japan and overseas

JCIA has further strengthened the supports to its members in the matter of the regulations which are currently process of establishment among especially Asian countries by collecting data on and analyzing the trends of the related regulations and institutions related to chemicals management in Japan and overseas and also by providing the information to JCIA's members in a speedy and precise manner and by proposing policy opinions to the relevant administrative authorities.

• Investigation and development of risk assessment technologies (QSAR seminar)

As regards new issues, JCIA implemented QSAR seminars for its members in September 2013 and in March 2014 for the purpose of promoting the advocacy and utilization of QSAR by the government and private sector, and has made efforts to share the technical information for the implementation of appropriate assessment.

Freon) amounted to 27 million tons in FY 2012 (see bottom of page 8 for details), which was a significant achievement corresponding to 2.1% of the annual greenhouse gas emissions of 1.3 billion tons in Japan.

*For further details, please refer to Reference Materials on JCIA's website.

• Reinforcement of collaboration with the Asian countries (including in particular GPS advocacy activities, training on risk assessment methods given by the Ministry of Economy, Trade, and Industry)

GPS risk assessment workshops focused on the preparation of GPS safety summary were held in Singapore, Chinese Taipei, Indonesia and Malaysia with the collaboration of ICCA Chemical Policy and Health (CP&H) and RC Leadership groups. Through these activities, JCIA has been supporting GPS advocacy activities of the respective associations in ASEAN and strengthening the relationship with the associations in the respective countries.

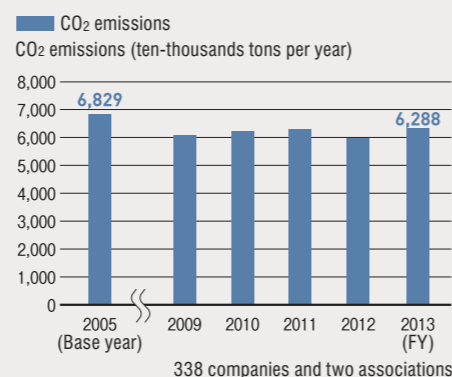
JCIA proactively participates in the

▶ QSAR seminar (September, 2013)



▶ Trends in CO₂ Emissions

(The JCIA's interim report figures for FY 2013)



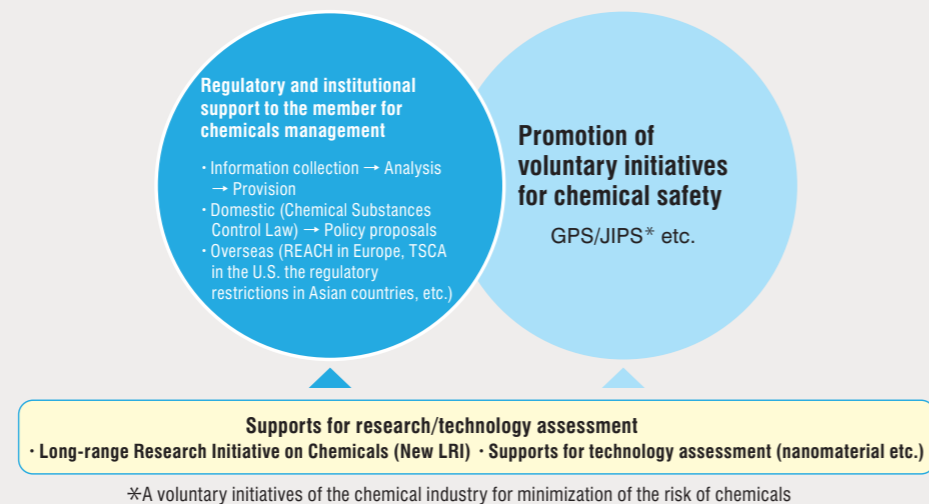
Asian Sustainable Chemical Safety Plan of the Ministry of Economy, Trade, and Industry (METI) and dispatches persons in charge and experts to METI's risk assessment method training seminar, and also supports the Asian chemical substances risk assessment methods training seminar held in Tokyo (with the participation of officers belonging to governments and private companies in charge of chemical products in Thailand, Vietnam, and Indonesia).

*For details about the promotion of the GPS/JIPS activities and the rollout of the supply chain activities (SCRUM project) which are JCIA's voluntary activities refer to the “Special Topic I” of page 10, and for details about the voluntary research activities related the chemical products (New LRI) and the training of persons actually engaged in risk management refer to “Technology and Human Resources.”

▶ GPS workshop in Taiwan (June, 2014)



▶ Total scheme of chemicals management



JCIA's Activities Technology and Human Resource

▶ The Chemical Industry's Contribution and Enlightenment toward Reduction of CO₂ Emissions

Energy-saving products utilizing materials and technologies provided by the chemical industry significantly contribute to the prevention of global warming. JCIA quantified the contribution of chemical products to reducing CO₂ emissions by applying the new method of cLCA (carbon Life Cycle Analysis) and published a report summarizing the cases, titled “Life Cycle Analysis of Chemical Products in Japan and around the World (third edition)*.”

The Chemical Sector of the World Business Council for Sustainable Development (WBCSD*) and ICCA in alliance have issued “Addressing the Avoided Emissions Challenge,” which is a global guideline in the cLCA method based on the “Guidelines for Calculation of the Avoided CO₂ Emissions” in the Japanese version, which was issued in February 2012. We will disseminate this method not only in the chemical industry but also in other industries.

▶ JCIA's cLCA report, third edition (March 2014)



▶ “Addressing the Avoided Emissions Challenge” (October 2013)



▶ Energy and Environmental Policies

For resource-lacking Japan, the securing of energy at affordable prices in a stable manner is an important issue. The industrial world, which experienced oil crises twice in the 1970s, has made relentless efforts to improve energy efficiency, and today Japan is known as an “advanced energy-saving nation.”

Self-help efforts have a limit, however. In order to achieve sustainable economic growth, it is necessary to insist on the viewpoint of the industry so that appropriate measures are taken in energy policy as well.

The new international framework for the reduction of greenhouse gases after 2020 will be agreed at the COP21 (Twenty-first Session of the Conference of Parties to the United Nations Framework Convention on Climate Change) held in Paris at the end of 2015.

ICCA of which JCIA is a member, adopted the written opinion statement on energy and climate change at the Board of Directors Meeting held in May 2014.

Because the chemical industry consumes fossil resources as a raw material and as a fuel material, it stresses the importance of supporting the development of all raw material and energy sources to respond to demand. It is also stresses that the most advantageous and highly cost-effective measures should be pursued for the reduction of greenhouse gases with the perspicacity of a global vision.



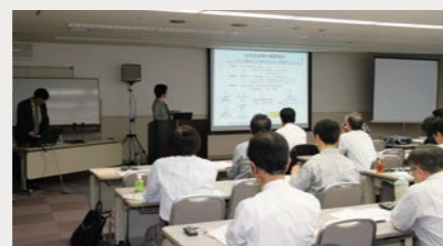
Cooperation: Mitsui Chemicals, Inc.

▶ Chemical Risk Forum

For those who were engaged in chemicals management, JCIA conducted in FY 2013 educational program called "Chemical Risk Forum" that consisted of basic knowledge of chemicals management and practical methods for risk assessment of chemicals. It also included latest regulatory trends for chemicals in Japan, Asia, Europe, and the United States of America. JCIA will continue to conduct the program improved to fit the needs of participants. In addition to this, JCIA will launch a new introductory program for those who need to learn the fundamentals of risk

management of chemicals. It will also help to understand the concept of chemicals management, and will enhance the spread of methods for the risk assessment of chemicals.

▶ Chemical Risk Forum



▶ Subsidization of <LRI: Long-range Research Initiative>

The chemical industries in Japan, the U.S., and Europe are promoting the "Long-term support for research into the effects of chemical substances on human health and the environment (LRI)" under the International Council of Chemical Associations (ICCA).

JCIA started its supporting activities in 2000, and transformed it into the "New LRI" in 2011, taking the changes in recent international trends related to the chemicals management into consideration.

In FY 2013, 3 designated subjects and 5 applied subjects were newly adopted, and total 20 subjects are being operated.

Under LRI, researchers are providing new insights and developing evaluation methods based on scientific evidence for the appropriate evaluation and management of chemical substances.

In August 2013, the 2nd JCIA New LRI annual meeting which attracted over 200 participants was held, at which JCIA highlighted problems propounded by a journalist and outstanding topics related to hazard testing with iPS cells.

Also, in an effort to raise the level of recognition of LRI, introduction of LRI was actively embarked upon at the related

congresses and in the industry journals. Furthermore some results of LRI activities were introduced to ASEAN countries on the premise that the results are to be rolled out to overseas.

▶ The 2nd JCIA New LRI annual meeting (August 2013, Tokyo)



▶ Fostering Program of Human Resources in Chemistry

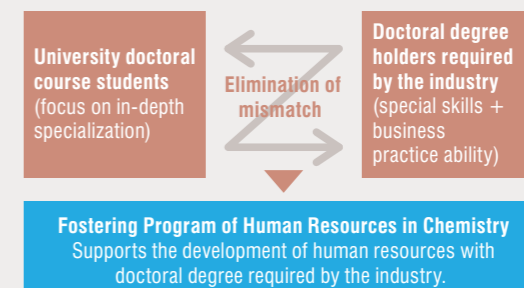
Fostering Program of Human Resources in Chemistry was established in 2010. The purposes of the program are to express the needs for human resources with doctoral degree required by the chemical industry and to support the doctoral course which can implement advanced curriculum responding to the needs and its students so that they will be engaged in the future chemical industry. At present, 37 companies participating in the program support 24 graduate school majors selected by screening.

As a FY 2013 initiative, "Research presentation meetings and introducing examples of activities by doctoral degree holders" was held in October to encourage interaction between students and member companies. In addition, a student-company exchange meeting was held in December at which doctoral course students and company representatives had the opportunity to

talk directly about employment and recruitment.

This program also provides scholarship grants to recommended students for specialized study subjects in which they have done most excellent work as one of the targets eligible for support.

▶ The program's objective is to foster the high-level human resources required by the chemical industry.



▶ Chemical Education and Enlightenment (Promotion of "Dream Chemistry-21"*, etc.)

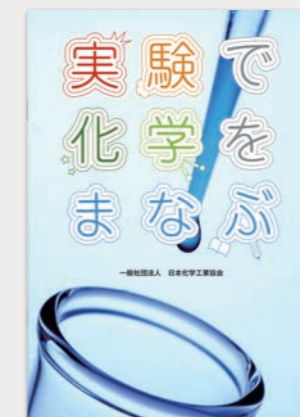
JCIA brings to the notice of society at large the importance of chemistry and of the chemical industry which significantly contributes to people's life and to the economy, and promotes a correct understanding and brings together excellent human resources who will be the bearers of the next generation so as to assure the further development of the chemical sector, and in order to cultivate them, it is implementing various education-supporting activities such as the "Dream Chemistry-21" campaign*.

*"Dream Chemistry-21" As academic societies (the Chemical Society of Japan and the Society of Chemical Engineers, Japan) and Industrial societies (the Japan Association for Chemical Innovation and the Japan Chemical Industry Association) join together as one, they are claiming the importance of the usefulness of chemical products and of chemical technology through comprehensive and integrated deployment of a chemistry image campaign. The chemical-experiment show for children and the "Chemistry Grand Prix" are examples of these activities.

▶ The DVD, "Plastic and our life" as a supplemental material for vocational education for teachers in junior-high and high schools



Leaflet: "Learning chemistry through experiments"



▶ Chemical-experiment show for children in summer vacation (August 2014, Tokyo)



▶ Seminar for science teachers (January 2014, Kobe, Hyogo Prefecture)



▶ Research presentation meetings and introducing examples of activities by doctor-degree holders

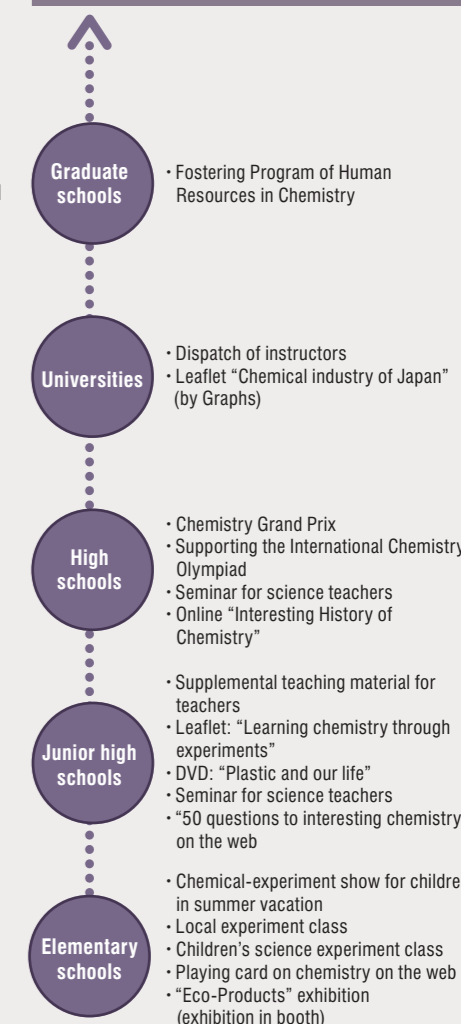


▶ Summary of the program

1. Publication of activities in supported graduate school majors
2. Employment support for doctoral course graduates
3. Holding of research presentation meetings
4. Support for activation of internships
5. Cooperation in curriculum reform
6. Scholarships

▶ Overview of Chemistry Education and Enlightenment

- Promoting understanding of the contribution made to the society by the chemical industry
- Securing and developing human resource in the chemical field
- Promoting innovation in the chemical field and, enhancing international competitiveness



▶ Technology Awards

The JCIA Technology Awards commend companies that have contributed to the progress of the chemical industry and the economy through the development and industrialization of outstanding chemical technologies. JCIA calls for applications from chemical-related companies and awards Grand Prize, Special Technology Prize, and Environmental Technology Prize for selected excellent achievements.

▶ FY 2013 (46th) Technology Awards

Grand Prize	Kaneka Corporation "R&D and Commercialization of PIXEO BP (material for Flexible Copper-clad Laminates: FCCL)"
Special Technology Prize	Shiseido Co., Ltd., Kao Corporation "Development of h-CLAT as Alternative Method of the Skin Sensitization Test"
Environmental Technology Prize	Dupont-Mitsui Fluorochemicals Co., Ltd "The World's First Commercialization of Low Environment Burden (Extremely Small Global Warming Potential and Zero Ozone Layer Depleting Potential) Fluorinated Fluid"

▶ Members of Kaneka Corporation, winner of the Grand Prize (May 2014, Tokyo)



JCIA's Activities Messages to Society

▶ Establishment of Chemistry Day and Chemistry Week

In 2013, the four organizations, namely, the Chemical Society of Japan, the Society of Chemical Engineers, Japan, the Japan Association for Chemical Innovation, and the Japan Chemical Industry Association, have instituted a Chemistry Day which falls on October 23, and a Chemistry Week which falls on the a week including October 23, starting from Monday to Sunday, in association with the Avogadro constant, 6.02×10^{23} /mol. Many countries overseas including the U.S. celebrate October 23 as Mole Day in commemoration of "mol." JCIA also has conducted various types of activities to diffuse and enlighten the public about "Chemistry Day" since this year.

▶ Demands for Tax Reform

The Japanese chemical industry can be described as a large industry supporting the Japanese economy and employment. Domestically, it ranks second in terms of the shipment value and third in terms of the number of employees (see page 7 for details); internationally, it ranks third in terms of shipment value after China and the United States.

Nevertheless, the business environment is harsh. Factors such as energy costs continuing at a high level cause a decrease in international competitiveness of the industry. On behalf of the chemical industry, therefore, JCIA has submitted tax reform demands to the Japanese government to put the business environment of the Japanese chemical industry on an equal footing* with that of other countries.

In FY 2013 JCIA submitted the following demands to the government.

- Expansion of tax measures to promote R&D
- Drastic revision of taxes for Climate Change Mitigation
- To relax the requirements for the application of the corporate reorganization taxation system
- Exemption in principle of the gasoline tax and the petroleum and coal tax levied on materials for manufacturing petrochemical products
- To review the corporate effective tax rate

▶ Response to Trade Issues

In the present condition in which bilateral and multilateral economic agreements are signed and negotiated extensively throughout the world, the Japanese chemical industry has to respond to the international trade issues which these economic agreements are dealing with. In ongoing collaboration with government, government ministries and agencies, industry associations of respective countries or regions, JCIA has, with regard to trade issues such as EPA/FTA (Economic Partnership Agreement/Free Trade Agreement), notably TPP* and TTIP*, the rules of origin, and anti-dumping regulations, continued supporting negotiations between governments through offering information and opinions, sharing information closely with industry associations of other countries or regions, and transmitting information to all members of JCIA.

In FY 2013, it should first be noted that, JCIA presented in July to the Government's Countermeasures Headquarters its "Opinions on TPP negotiations" which summed up the requests in the Japanese chemical industry in connection with TPP negotiations.

The statement on supporting the further promotion of FTA negotiations between EU and Japan has been published by JCIA in alliance with the European Chemical Industry Council (Cefic) in November. Further, JCIA participated in the "Japan-EU Industry Dialog" organized by the Keidanren (the Federation of Economic Organizations) and Business Europe (European Managers' Federation) and held in March 2014, and together with Cefic strongly supported the promotion of the Japan-EU FTA negotiations from the standpoints of both the Japanese and European chemical industries.

▶ Joint statement on the Japan-EU FTA



▶ Information Exchange with the Chemical Industry of the Other Countries and Regions

JCIA also conducts industry-level communication activities with other countries and regions. As an example, the 4th annual meeting was held in November 2013 with the Korea Chemical Industry Council (KOCIC) at Daejeon, Korea, in order to exchange information and opinions. In addition, JCIA attends the international meetings such as APEC*, AMEICC*, in the capacity of representing the Japanese chemical industry, and is engaging in information exchange and also in presenting necessary opinions.

▶ The 4th JCIA KOCIC Annual Meeting



▶ Transmission of Information to the Members of JCIA

For the purpose of information transmission to the members of JCIA, seminars on the rules of origin and anti-dumping regulations, were conducted for 4 times by inviting experts from the Ministry of Economy, Trade, and Industry and the Tokyo Customs. JCIA will conduct seminars based on the needs of the members of JCIA, and will continue providing information in a more timely manner through JCIA website.



Introduction of the New Members

We herein introduce the new members admitted to JCIA.
We thank you for letting us know the current status of your activities and your future expectations towards JCIA.

Canon Inc.

▶ Profile

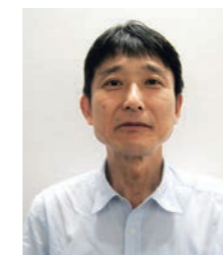
Established in August 1937
Paid-in Capital: 174.7 billion yen (As of the end of December 2013)
Sales amount (not consolidated): 2128.7 billion yen
Number of employees (not consolidated): 26,114

▶ Purpose of becoming a member

We joined the Association because we need to gather the latest information items on the overseas regulations (especially in non-English-speaking countries) applicable to the global rollout of business, the actual status of operation and the moves and the way of thinking of the upstream industry (chemicals manufacturers etc.).

▶ Current activity status

We are establishing an ongoing company-wide commitment to matters related to the chemical substance control standards for our products, promotion of green procurement, and reduction of emission quantities of chemical substances subject to control. It is very helpful for selling our products worldwide to obtain the latest information from JCIA by participating in the Chemicals Management Committee, Foreign Legislation WG, and EU Legislation WG.



Canon Inc.
Quality Management Hdqrs.
Quality Standard Management Center,
Chemical Safety Regulation Management Dept.

Mr. Tsuyoshi Takiguchi,
Assistant Manager



▶ Request and expectations towards JCIA

The latest information on new regulations provided by JCIA related to Europe and the U.S. as well as to Asian, BRICS and Middle-East countries etc. are helpful to our drawing up of preliminary measures for our products. In order to have the downstream companies get to know the way the upstream chemical industry thinks, we welcome the making of policies which incorporate your interpretations as experts and your opinions as members with respect to the domestic and overseas regulations to be laid down in the future. Furthermore, we are welcoming also activities such as negotiations with public organizations which individual companies cannot conduct on our own and public comments on the problems of the legal and regulatory system.

KOKUYO Co., Ltd.

Aiming the Establishment of Voluntary Management Criteria
From hazard base to risk management

▶ Profile

Established in October 1905
Paid-in Capital: 15.8 billion yen (As of the end of December 2013)
Sales amount (consolidated): 288 billion yen
Number of employees (consolidated): 6,399

▶ Purpose of becoming a member

We joined JCIA to promote response to inquiries from the consumers for the stationery and furniture business and the deployment of the voluntary criteria creation for managing chemical substances included in the products as well as obtaining of the latest information of the regulatory restrictions domestic and overseas and in-house sharing of above information.

▶ Current activity status

We have just completed a draft of the in-house standard for the hazard base according to JCIA knowledge. Therefore, we will initiate the risk survey of the products. Then, we will discuss the survey results to finish the management criteria for the purpose of transmitting the criteria to publication and operation.



KOKUYO Co., Ltd.,
Corporate Administrations,
CSR and Environmental Management

Mr. Shinichi Saito,
Manager



Landscape of the garden office in Shinagawa



Product line

▶ Request and expectations towards JCIA

We are welcoming the examples of consultations with consumers on PL (product liability) of the chemical substances and obtaining information about precedents new regulations both in Japan and in Asia, so that we can utilize the examples and information for the new product development and as basic information on the supply chain including CSR procurement. In addition, it would be very helpful if JCIA could give instructions on how to utilize chemical substances in the easily understandable manner for the people like us in fields other than the chemical field. Furthermore, we are also looking forward to JCIA serving as a liaison bridge between downstream companies like us and upstream companies / public organizations.

Glossary

(In the main text, terms are marked with an asterisk on first mention.)

Term/ abbreviation	Official name	Explanation	Page
Equal footing	Equal footing	Identical conditions. Or, to equalize the conditions. To equalize infrastructures or conditions, so that the both sides can compete under the same circumstance when selling products or services.	P23
“Dream Chemistry-21” project	“Chemistry Makes Our Dreams Come True” project	Educational program for the next generation run by the Dream Chemistry-21 Committee comprising four organizations in academic and industrial chemical circles (the Chemical Society of Japan, the Society of Chemical Engineers, Japan, the Japan Association for Chemical Innovation, and the Japan Chemical Industry Association). It was launched in 1993 for the purpose of chemical enlightenment and promotion of understanding of the chemical industry’s contribution to society. The program operates Chemical Experiment Show for children, Weekend Experiment Classroom, and a Chemistry Grand Prix and also sends representative students to the International Chemistry Olympiad.	P15, P16, P22
APEC	Asia-Pacific Economic Cooperation	The primary economic forum supporting sustainable economic growth and prosperity in the Asia-Pacific region, which stretches from East Asia and Australia to the Americas of 21 countries and regions.	P23
AMEICC	ASEAN Economic Ministers and METI Economic and Industrial Cooperation Committee	To strengthen the economic competency of ASEAN established in 1998, to promote the industrial cooperation in the member countries and regions, and to support the development collaboration for the new member country.	
cLCA	carbon Life Cycle Analysis	A calculation, as avoided emissions, of the difference in CO ₂ emissions between finished products using chemicals and comparative products in their respective life cycles, from the extraction of materials to disposal.	P15, P16, P20
COP21	Conference Of Parties	The 21st session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) is expected to take place in December 2015, in Paris, France. The framework of the measures against climate change and global warming for 2020 and later is expected to be agreed in this session.	P02, P04, P20
GHS	Globally Harmonized System of Classification and Labelling of Chemicals	The globally harmonized system of classification and labelling of chemicals (GHS) was recommended by the UN in July 2003 to provide standard criteria for classifying chemicals according to their hazards and informing users about their hazards using labelling and Safety Data Sheet (SDS). It is revised every 2 years.	P14
GPS	Global Product Strategy	The Global Product Strategy (GPS) was developed by the International Council of Chemical Associations (ICCA) as part of its commitment to the United Nations Strategic Approach to International Chemicals Management program. GPS is part of the international chemical industry’s voluntary Responsible Care Global Charter. It commits companies to promote the safe use of chemical products and enhance product stewardship throughout the value chain. GPS is a capacity-sharing exercise working towards: • Reducing differences in the safe handling of chemical substances between developing, emerging and industrialized countries. • Ensuring the correct handling and use of chemicals across the value chain and across geographical boundaries by providing relevant and reliable information. • Greater transparency, by helping companies provide stakeholders with information about marketed chemicals in an easily understandable format: GPS Safety Summary.	P05, P09, P10 P14–P16 P19
ICCA	International Council of Chemical Associations	An organization representing the world’s chemical industry. As well as Responsible Care, it places importance on activities relating to chemicals safety management through the Global Product Strategy, international discussions on climate change, support for developing nations, and communication with stakeholders.	P02–P06, P09 P13–P15 P19–P21
ICCM	International Conference on Chemicals Management	At the first conference held in Dubai in February 2006, the Strategic Approach to International Chemicals Management (SAICM) was concluded. The third conference (ICCM-3) was held in Nairobi in September 2012. ICCM-4 will be held in September 2015 in Geneva.	P09, P14
JAMP	Joint Article Management Promotion-consortium	It was set up as a cross-industrial activity promotion entity in September 2006, for the purpose of proper management of chemical substances contained in articles (parts and final products), and of smooth disclosure and transmission of such information in supply chains by establishing a specific mechanism.	P10
JIPS	Japan Initiative of Product Stewardship	A Japanese voluntary initiative by the industry based on risk assessment and risk management taking the supply chain into account. Japanese version of ICCA GPS.	P09, P10, P15 P16, P19
LRI	Long-range Research Initiative	An initiative to give long-range support to research on the impact of chemicals on human health and the environment utilizing funds provided by LRI member companies. Three chemical organizations (JCIA, American Chemistry Council, and Cefic) manage the initiative under ICCA.	P14–P16 P19, P21
PRTR	Pollutant Release and Transfer Register	A system that (i) requires businesses handling chemical substances potentially hazardous to the environment to estimate the amounts of chemical substances released and transferred in waste, and to report the data to their local governments, and that (ii) the national government then compiles data submitted and makes the results public.	P18
SAICM	Strategic Approach to International Chemicals Management	Compiled at the International Conference on Chemicals Management (ICCM-1) in 2006. Further ICCM meetings are scheduled to be held in 2015 and 2020 for follow-up.	P09
SCRUM Project	Project of Supply chain Chemical Risk management and Useful Mechanism discussion	Its purpose is to engage in activities in Japan to establish the framework for common assessment methods and information transmission that are required to manage chemical substances on a risk base in the entire supply chain for reduction and minimization of the risk of the chemical substances, and it also contributes to the achievement of the goal of SAICM.	P10, P15, P19
TPP	Trans-Pacific Partnership	Currently, it is conducting negotiations aiming at a high level of liberalization of trade in the 12 countries in the Asia-Pacific region by way of comprehensive agreements including non-tariff articles and new trade issues.	P23
TTIP	Transatlantic Trade and Investment Partnership	It is a trade agreement to be negotiated between the European Union and the United States on the subject of commerce and investment for economic growth and job development.	
UNEP	United Nations Environmental Programme	In response to a proposal made by the UN Conference on the Human Environment, held in Stockholm in June 1972 with “Only One Earth” as its slogan, UNEP was established on the basis of a UN General Assembly resolution in the same year as an organ to put the Declaration of the United Nations Conference on the Human Environment and the Action Plan for the Human Environment, adopted at the same conference, into practice. Its office is in Nairobi.	P04, P05
VOC	Volatile Organic Compounds	The generic chemical name of the organic compound which has volatility and becomes gas-like in the atmosphere. They include a wide range of substances, such as toluene, xylene, and ethyl acetate.	P18
WBCSD	The World Business Council for Sustainable Development	The World Business Council for Sustainable Development (WBCSD) was established in 1991 in response to the Earth Summit held in 1992 with the members working together across sectors, geographical areas and value chains across economic areas. It is now comprised of approximately 170 international corporations over 35 countries across 20 industrial fields. It works on three major subjects, economic growth, the balance of the environment, and social advancement.	P20
WSSD	World Summit on Sustainable Development	The World Summit on Sustainable Development held in Johannesburg, South Africa, in August 2002 was organized mainly by UNESCO in order to develop a worldwide interest in the challenging issues facing human beings and to promote worldwide activity to solve them. The “Johannesburg Declaration” on Sustainable Development was adopted in the 2002 summit.	P09, P10, P14

Expectations of JCIA

Future in Japan Stakes on the Innovation in the Chemical Industry

Dr. Hiroyuki Itami

Dean, Professor of Management, Graduate School of Innovation Studies, The Tokyo University of Science, and also Professor Emeritus of Hitotsubashi University



1967 graduated from the Faculty of Commerce of Hitotsubashi University. 1969 finished the doctor course of the Graduate School of Commerce of Hitotsubashi University. 1972 finished the doctoral course of the Graduate School of Business Administration of Carnegie Mellon University, and was awarded a Ph.D degree. 1973 Full-time instructor of the Faculty of Commerce of Hitotsubashi University. 1977 Associate Professor, Hitotsubashi University, and in 1985 Professor at Hitotsubashi University. Meanwhile, concurrently serves as an associate professor in Stanford University. From 1994 to 1996 Dean of the Faculty of Commerce of Hitotsubashi University. 2000 Professor of the Graduate School of Commerce of Hitotsubashi University. Held prominent positions in government-affiliated committees such as IT strategy hdqrs., bio-technology strategy meeting. From 2008 Remained in the current position, and Professor Emeritus of Hitotsubashi University.

As this annual report introduces, I attended ICCA Symposium as a moderator, and one of the most impressive expressions used by Dr. Pailin, President & CEO of PTT Public Company Limited was his saying “The license of business operation.” Dr. Pailin said that it is necessary for a corporation to grow to the level of being continuously granted a license from society in the sense of receiving some kind of social approval and permission to engage in business activities.

It is true that as far as chemistry is concerned, the pollution issue due to the chemical substances had been a social problem in the past, and that chemistry may cause problems in the local community in terms of safety, when we focus on the negative phase of the chemical industry, so that “The license of business operation” is a significant challenging issue also for the chemical industry of Japan. On the other hand, it is encouraging that a message from JCIA chairman in this annual report points out “Safety” first as a keyword.

How can the chemical industry continue being granted a license of business operation from society? There is only one way for this where the chemical industry is concerned. They shall keep producing the value-added content which contributes to the region and nation on a gigantic scale. On this point, the chemical industry of Japan has already been an industry which creates the nation’s largest value-added amount surpassing the automotive and electric industries. The number-one industry in Japan is the chemical industry, judged on the basis of the magnitude of the economic contribution, it makes in

terms of the value-added content it creates. The people in the chemical industry should be proud that their industry is Japan’s number-one industry despite the sorry fact that Japan is not necessarily blessed with her natural conditions including superiority of feedstock.

Yet, how can they keep on creating a value-added content as the number-one industry in Japan? There is also only one answer. They shall keep on creating innovations. They shall keep on providing continuously the chemical materials and chemical systems that are required by the society by honing technology. In turn, society bestows a vast value-added content upon the chemical industry as a reward for its innovations. The fact that innovation has been the second keyword in the message from the chairman in the annual report is indeed hit the right nail on the head.

The innovation-oriented country is Japanese national policy. Thus, Japan’s future hangs on the innovation her number-one industry can produce. I hope that, in response to this challenge, the chemical industry will continue creating world-leading innovation through the complexity of its materials, chemical products and chemical systems and that to this end the chemical industry will engage in close teamwork with the other two main industries, namely, the automotive and electric industries, that stand side by side with the chemical industry. I also hope that the chemical industry will bring forth innovations which will be contributory to human health. The expectations towards the chemical industry are vast.

■ Editorial policy

“JCIA Annual Report” has been issued to explain to a wide range of stakeholders what kind of organization JCIA is and what activities it is engaged in. The 2014 issue which will be the second one of JCIA annual reports gives an outline of “ICCA Board of Directors Meeting” which was first held in Japan under the international initiative in which JCIA displaying leadership, and of the simultaneous held “JCIA Special Seminar” as well as the “ICCA Symposium.” Also, the contents of the activities under the “Chemicals Management Initiative” and “JCIA’s Safety and Disaster-Prevention Efforts” are reported as special feature articles, and the contents of JCIA annual activity including RC activity are simply summarized in the latter part of the annual report. For more details about these activities, please visit JCIA’s website. Please also note that the content of the “Responsible Care Reports” that we used to publish are now incorporated in “JCIA Annual Report Reference Materials.”

■ Targeted organizations

Targeted organizations are the Japan Chemical Industry Association and member companies and organizations.

■ Languages

This report is issued in two languages, Japanese and English.

■ Reporting period

August 2013–July 2014 (Some information from outside this period is included.)

■ Publication date

November 2014

■ Scheduled date of next publication

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■ Inquiries

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