

# Intellectual Property Report 2014

April 2013 to March 2014



# C O N T E N T S

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## Introduction



Mamoru Kadokura, President

I offer my greetings with the issue of KANEKA Group's *Intellectual Property Report 2014*.

Both the global economy and Japan's economy are expected to keep heading toward recovery, but there still remain concerns about possible downside risks and uncertainties of future economic trends.

In this environment, we have promoted innovative changes in our business configurations, including the strengthening of our R&D and the promotion of global development, with the aim of realizing the long-term management vision, "DECLARATION OF KANEKA UNITED for the Future" formulated in 2009, which marked the 60th anniversary of KANEKA Group's foundation.

In order to take the measures presented in the long-term management vision and to realize the performance goals of the individual groups, we are executing the following important measures:

- (i) to further strengthen the existing businesses and to enhance profitability through early improvement in the competitiveness of products in our new businesses;
  - (ii) to make an innovative change to a market-oriented and customer-oriented business model;
  - (iii) to enhance cost performance of the entire value chain, including manufacturing, research, engineering, and sales; and
  - (iv) to promote globalization rooted at the local level.
- Strategic creation, protection, and utilization of intellectual property are indispensable to achieving these innovative changes.

Carrying out our management strategies that unite business strategies, research and development strategies, and intellectual property strategies, and maintaining our well-developed intellectual property portfolio management, we will redouble our efforts to build up strengths of our intellectual property and our brand from a global perspective.

We hope that *Intellectual Property Report 2014* serves to deepen your understanding of our intellectual property-backed management and activities. We highly appreciate your ongoing support, and would be most grateful for your increased support going forwards.

September 2014



Farseeing and collaboratively value-creating group  
(Dreamology Company)

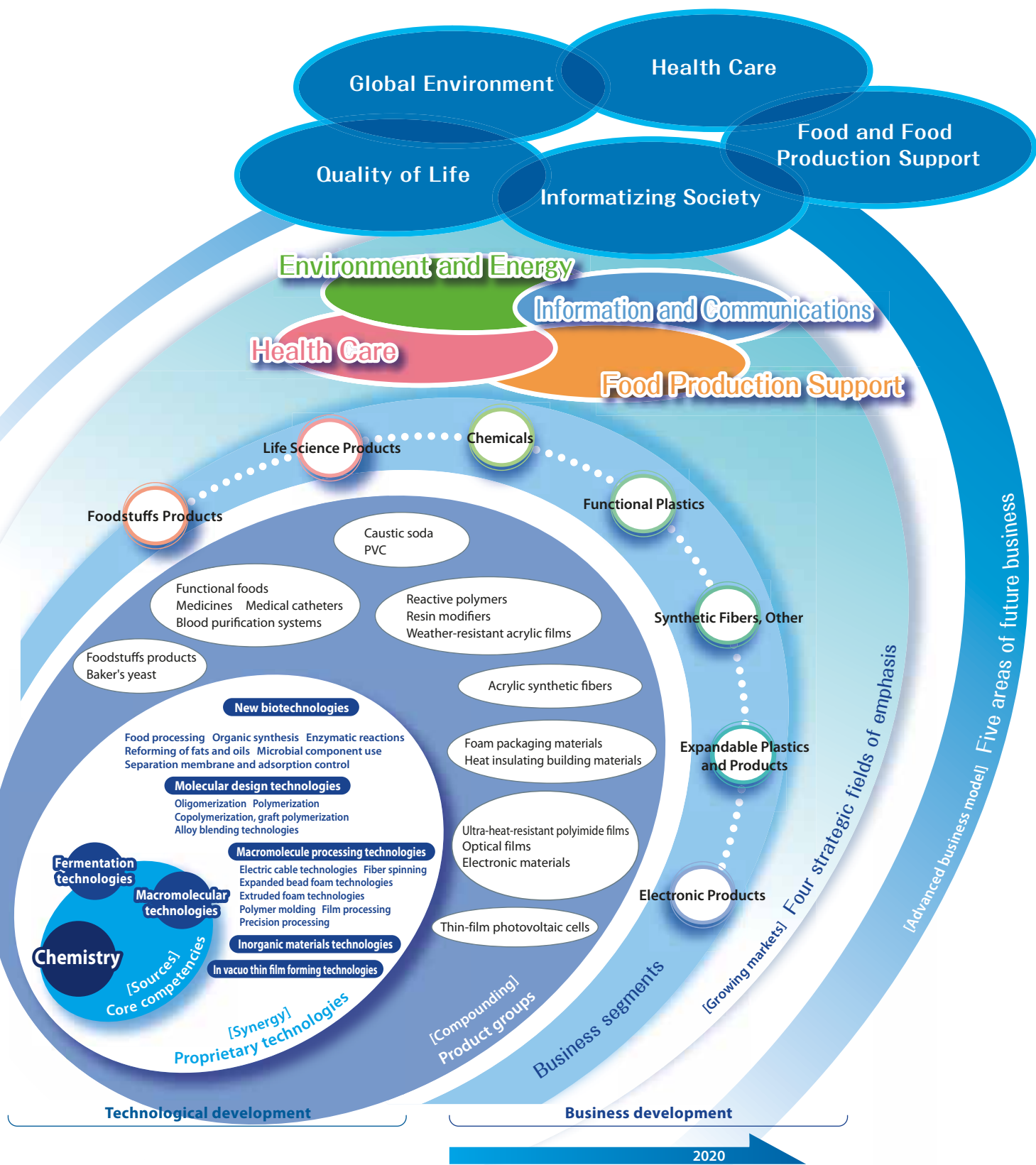


Fig. 1

KANEKA's technological and business development



# 1. Core Competencies and Business Model

Since its foundation, KANEKA has promoted technological development with macromolecular and fermentation technologies as its core competency fields (Fig. 1). We have created our highly specialized product groups through these multiple proprietary technologies and their synergetic effects. Such a rich diversity is the driving force behind our growth.

In the future as in the past, we will continue to develop new products and new businesses by uniquely combining our proprietary technologies. Starting with this, and looking from the perspectives of customers, a materials-to-sale value chain, and globalization, we will construct business models that flexibly respond to the changing environment with new businesses and products.

## 2. Strategic Fields of Emphasis and Business Strategy Direction

Figure 1 shows the strategic fields of emphasis, current business segments, and an outlook on future business groups.

There are four strategic fields of emphasis, in which KANEKA will make concentrated investments of resources as we move toward 2020. These are "Environment and Energy," "Health Care," "Information and Communications," and "Food Production Support." These fields are future growth markets and domains where KANEKA can contribute to society.

At present, we operate in the seven business segments of Chemicals, Functional Plastics, Expandable Plastics and Products, Foodstuffs Products, Life Science Products, Electronic Products, and Synthetic Fibers, Other. Each segment will expand its business enterprises in the strategic fields of emphasis by creating new

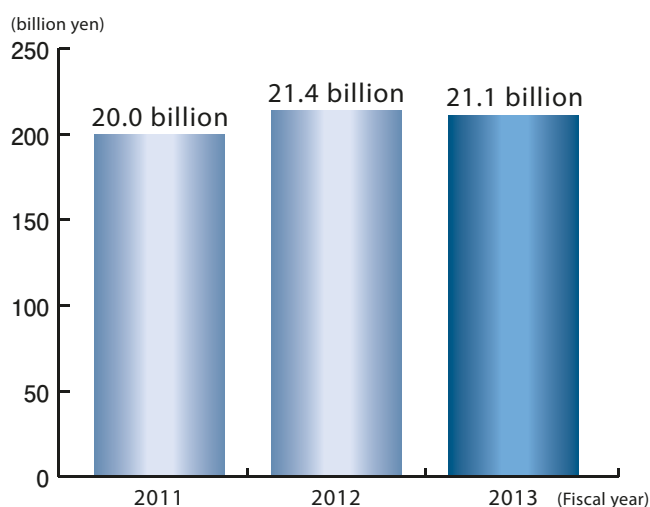
businesses and by M&A, and our current business groups will be changed into business groups concentrating on the above four strategic fields of emphasis by 2020.

The total amount of research and development expenditures by KANEKA Group was 21.1 billion yen for fiscal 2013 (Fig. 2).

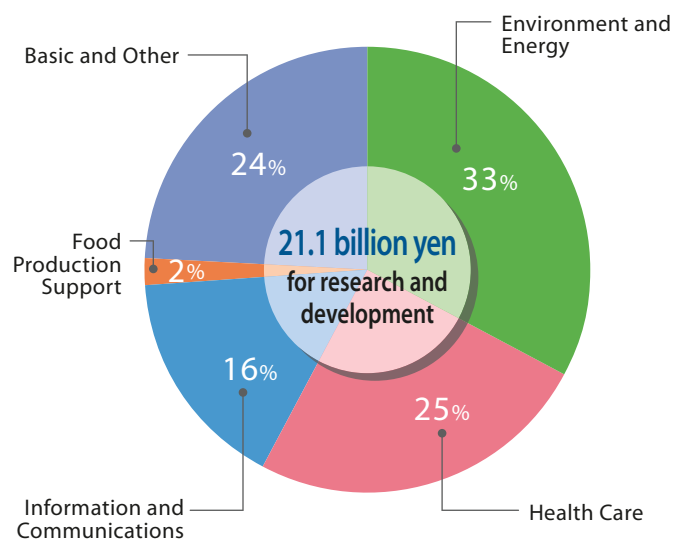
Of this, 76% (16.0 billion yen) was directed to the four strategic fields of emphasis for promoting business development (Fig. 3).

The total amount of research and development expenditures for fiscal 2013 is lower than that for fiscal 2012. This decline, however, is caused due to change in the depreciation procedure.

There is no decrease in the total amount when calculated using the former procedure.



**Fig. 2** Transition of research and development expenditure (by KANEKA Group)



**Fig. 3** Research and development expenditures by KANEKA Group in fiscal 2013, divided by strategic field of emphasis

# 3. Strategic Fields of Emphasis and Overview of Intellectual Property

**What lies at the heart of our corporate philosophy, "By a creative integration of people and technology, we will collaboratively create value that breaks fresh ground for the future and contribute to the global environment and to quality of life," is sustainable development.**

**Innovation is indispensable to achieving the sustainable development. We recognize that the innovation is supported by intellectual property.**

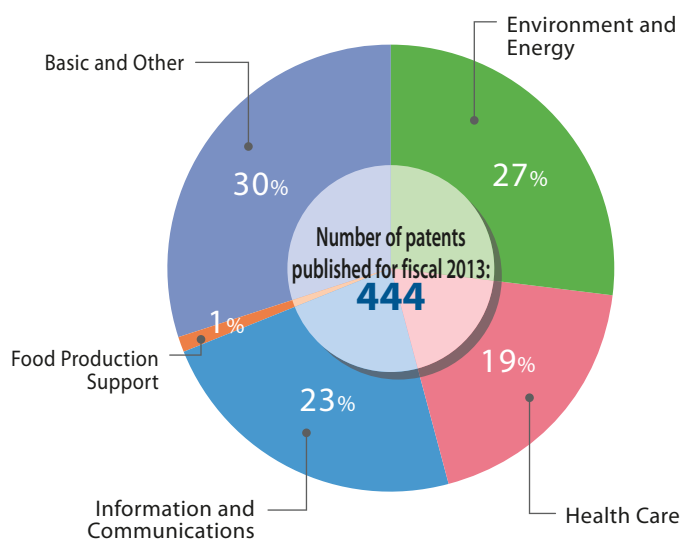
**Guided by this basic recognition, we will carry out our management strategies as a research and development enterprise by uniting business strategies, research and development strategies, and intellectual property strategies.**

Our basic policy concerning the execution of intellectual property strategy lies in contributing to competitive business development based on intellectual property

portfolio management and in creating new business. To do this, we will build up a system enabling us to pour our efforts into the strategic fields of emphasis, promote globalization, strengthen group management, and promote M&A.

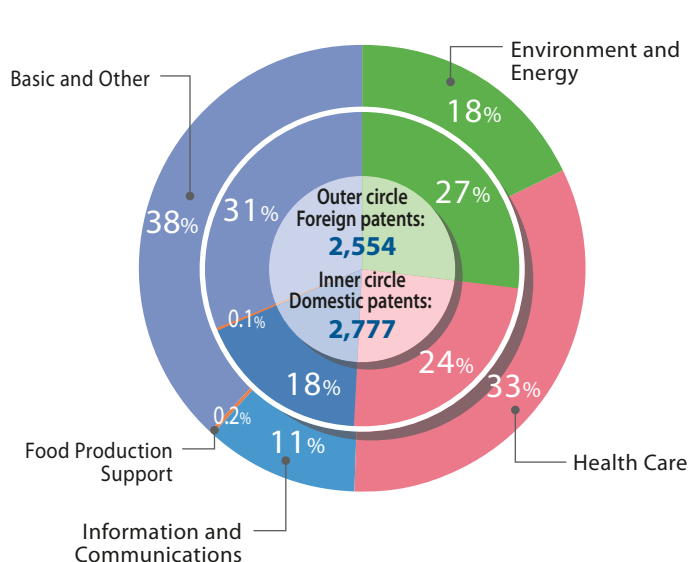
In the strategic fields of emphasis, we are promoting patent applications and registrations globally, especially in the significantly developing Asia region.

KANEKA Group's published domestic patent applications in fiscal 2013 numbered 444, of which 310 (70%) were in the four strategic fields of emphasis (Fig. 4). At the end of March 2014, KANEKA Group possessed 2,777 domestic patents, of which 1,916 (69%) were in the four strategic fields of emphasis, and 2,554 foreign patents, of which 1,583 (62%) were in the four strategic fields of emphasis (Fig. 5).



**Fig. 4**

Number of domestic patents published for KANEKA Group in fiscal 2013, divided by strategic field of emphasis



**Fig. 5**

Numbers of patents possessed by KANEKA Group as of the end of March 2014, divided by strategic field of emphasis





# 4. Analysis of Marketability of Technologies and Dominance in Markets

KANEKA aims to be a research and development enterprise. All its employees are making efforts to develop innovations that benefit society and are developing new products and new markets using new technological developments and strengthening of

existing technologies.

Here we describe the marketability of technologies and dominance in markets, along with our strategies for the four strategic fields of emphasis.

## Environment and Energy

We are developing products that contribute to the environment and energy, such as thin-film photovoltaic cells with the concept of beautiful photovoltaic cells mounted on residential roofs, organic EL lighting devices, which are new business products, and home-use stationary lithium-ion rechargeable batteries that are characterized by their safety.

We have diverse potential for developing products such as environment-conscious materials, e.g. our original, highly-biodegradable, soft, heat-resistant biopolymer of 100% plant origin (KANEKA Biopolymer AONILEX), and expandable plastic products whose themes are "weight-saving" and "energy-saving".

Regardless of whether they are new or existing businesses, we will further expand areas where we can contribute to the environment and energy savings.

## Health Care

We are promoting our business in the Health Care field primarily with medical equipment, medicinal bulk intermediates, and functional foodstuffs business, and we also will expand our business using M&A and other activities.

Also, we will create new markets and products with our proprietary biotechnologies and material technologies, using our business in regenerative medical devices, medical polymers, biologics, and materials for preventative medicine and nursing care, among others.

In fiscal 2013, with the aim of further expanding our interventional treatments business, we made River Seiko, K.K. a consolidated subsidiary, thus making a full-scale entry into the field of gastroenterological instruments.

We will expedite the development of new products by combining our specialized macromolecule processing technologies with the metal processing technologies of River Seiko, K.K.

## Information and Communications

We are developing new businesses in areas such as opto-electro chemicals used in LED lighting and elsewhere; thermal solution materials able to deal with high heat problems in increasingly compact and high-capability devices; and transparent conductive films, using our specialized macromolecule technologies.

Meanwhile, we will advance our electronics technologies and ultra-heat-resistant polyimide film, optical film, and other materials technologies to create new products that will support society in the future.

In fiscal 2013, we commercialized transparent conductive films (ITO films) for touch panels of smartphones and tablet PCs, demands for which are greatly increasing.

## Food Production Support

KANEKA has wide-ranging potential to cope with the issue of food shortages caused by population increases.

We will create new business through functional feed material and other stockbreeding and cultivation support materials, plant supplements, and other farm production support materials.



## 5. Research and Development-Intellectual Property Relational Diagram; Research and Development Cooperation and Affiliation

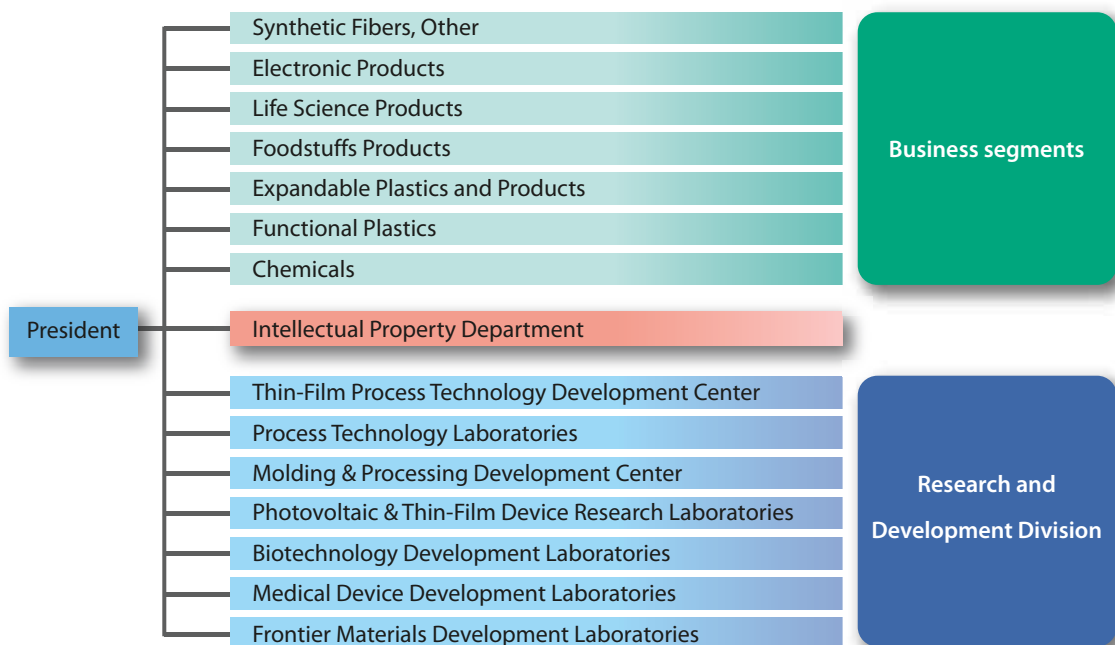
Figure 6 shows the relationship of research and development to intellectual property in KANEKA.

KANEKA's research and development system is managed by five research institutes and two centers, which report directly to the president.

The individual institutes and centers are functionally linked to the research organizations of the business segments and aim for the distribution, effective application, and synergistic effect of research and development resources such as personnel, materials, funds, and information, and are working to advance their respective research and development themes.

As a system under direct control of the president, the Intellectual Property Department develops intellectual property strategies and manages intellectual property portfolios for the entire KANEKA Group.

In addition, we have assigned an intellectual property committee member as an intellectual property portfolio manager to each Research and Development institute and each business segment, in order to drive intellectual property efforts effectively.



**Fig. 6** Relational diagram of Research and Development Division and Intellectual Property Department

As for research and development efforts, we are globally developing open innovation, including by acquisition and development of overseas research and development bases. By creatively combining external technologies, we are promoting innovative changes in research and development and process innovation in the form of innovation in production methods to develop and propose earth-friendly processes.

We opened KANEKA US Material Research Center Facility as our new R&D facility within the Texas A&M University (Texas, USA) in order to pursue open innovation on a global scale.

With the purpose of promoting KANEKA's global development in the United States, it will actively promote R&D activities in close cooperation with the R&D Division, with the objective of enhancing advanced material products and development of the production process. As a result of joint research with the Japan Aerospace Exploration Agency (JAXA), we have developed a thermally-resistant and soluble thermosetting imide resin for a base material of carbon fiber-reinforced plastic (CFRP). We are aiming for our thermosetting imide resin to be adopted into engine peripheral parts, as an alternative to metal, for use in aircraft. Currently the predominant epoxy resin-based CFRP is not used for this purpose.





## 6. Policies Concerning Acquisition and Control of Intellectual Property, Control of Trade Secrets, and Prevention of Technology Leaks

KANEKA has established intellectual property control regulations and taken care to carry out appropriately the creation, protection, and utilization of intellectual property.

The Intellectual Property Department has established as a guiding principle of its operations concerning acquisition and control of intellectual property the slogan "High-quality, speedy, and global". It responds to globalization of intellectual property, in particular, and aims to strengthen a system for acquiring and utilizing foreign patents.

It also enriches the foreign patent search system to strengthen a system for not only protecting our patent rights but also preventing our infringements of patent rights owned by other companies.

In addition, it introduces the companywide workflow using its intellectual property control system to accelerate the intellectual property business process, strengthen documentation control, and improve work efficiency.

We control trade secrets by having the employees thoroughly informed of the contents of the compliance

guidebook edited by the CSR Committee, as well as of employment regulations and know-how management procedures.

To encourage excellent inventions, we have instituted a commendation system for outstanding inventions. In this system, we recognize outstanding inventions, placing emphasis on quality, within 2 years after the patent applications for said inventions are filed.

We commended 8 outstanding inventions during fiscal 2013.

Regarding remuneration for an employee's invention, we determine the amount according to the results of an examination by the Remuneration Review Committee based on invention remuneration regulations and based on the working profit for the preceding three years and royalty income. The result of the review is released within the company.

No upper limit is set to the remuneration amount. Further, the Intellectual Property Department has established a new organization specialized for patent search to reduce the patent search workload for researchers.

## 7. Contribution of License-Related Activities to Operations

Generally, the main objectives for acquiring and controlling intellectual property rights are "to maximize the profit from one's own business" and "to gain direct profit from the intellectual property."

KANEKA's prime objective is "to maximize the profit from its own business." We will develop business operations to be as advantageous as possible, using patent rights as exclusive privileges.

On the other hand, we will use licenses if they will effectively expand markets where our technologies have

been patented.

Also, as we particularly work toward creating new businesses, we will actively build business alliances using licenses and cross-licenses.

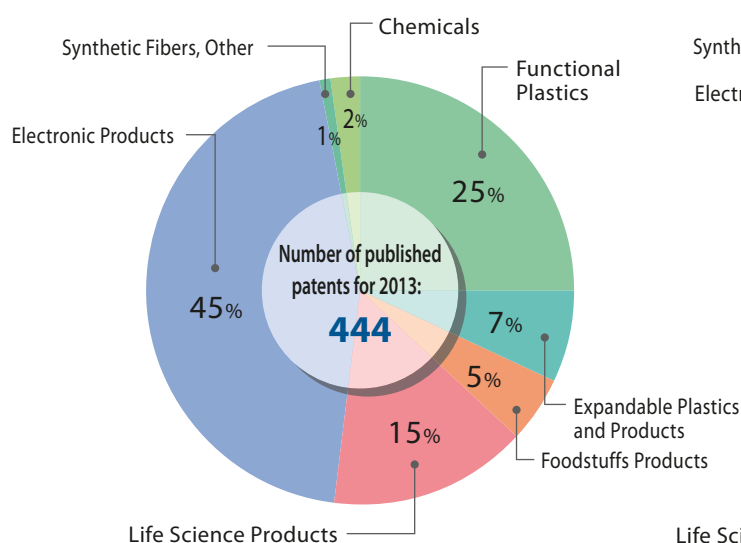
In January 2014, we concluded a non-exclusive comprehensive license agreement, in the organic EL field, with Universal Display Corporation in the United States, concerning patent groups related to organic EL devices that use phosphorescent materials.



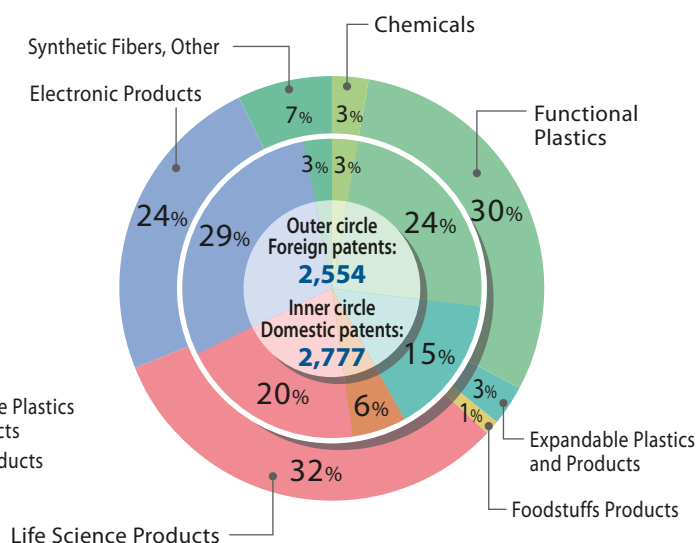
# 8. Contribution of Patent Groups to Operations

KANEKA contributes to operations through filing and registration of foreign patent applications carefully selected within each business segment after an examination of their compatibility with a wide spectrum of domestic patent applications and business developments. We also strive to strengthen our foreign intellectual property rights in line with the Asian shift of international business.

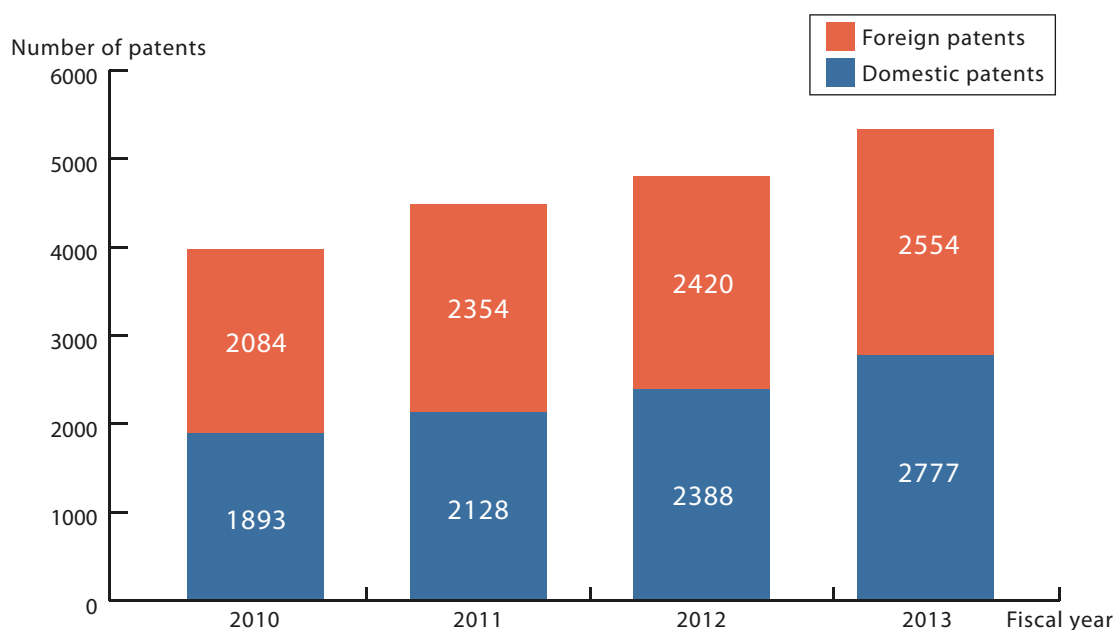
As Figures 7 and 8 show, the proportion of KANEKA Group's published domestic patents and patents possessed by KANEKA Group in the Functional Plastics, Life Science Products, and Electronic Products segments is higher than those in the other segments. Also, as Figure 9 shows, our domestic and foreign patents are increasing yearly.



**Fig. 7** Number of published domestic patents for KANEKA Group in fiscal 2013, divided by business segment



**Fig. 8** Number of patents possessed by KANEKA Group at the end of March 2014, divided by business segment



**Fig. 9** Changes in number of patents owned by KANEKA Group

**We have been filing strategic patent applications, aiming to construct a strong patent portfolio that covers important themes in research and development for the strategic fields of emphasis.**

As an example of the construction of strong patent portfolio, the following will introduce KANEKA KanCapA™, which is the protein A resin used for purification of therapeutic antibodies.

The protein A resin is a chromatography matrix produced by immobilization of a specific protein, Protein A, on a porous base matrix.

In the process of production of therapeutic antibodies, which are used as innovative therapeutic agents for treatments of cancer, rheumatoid arthritis, and other diseases, KANEKA KanCapA™ is used in the step of highly purifying a therapeutic antibody by taking advantage of the characteristics of protein A, which binds specifically to an antibody.

By using our originally-developed protein modification technique, we succeeded in developing protein A that exhibits high antibody absorbing capacity, high alkaline

resistance, and high stability against repeated cycle use.

By immobilizing the protein A on a highly cross-linked cellulose, we completed KANEKA KanCapA™ as an industrially applicable product at a high flow rate. KANEKA KanCapA™ was launched for commercial use in 2012.

KANEKA KanCapA™ has already been selected by several major pharmaceutical companies. We aim to achieve total KANEKA KanCapA™ sales of over 10 billion yen in the next five years.

As a result of these research and development works, we have filed a wide variety of patent applications, including patent applications related to the technique of modifying Protein A (WO 2010/110288, WO2011/118699, and others), a process for fermentative production of Protein A, and a process for immobilizing Protein A on a base matrix (31 family applications have already been filed as of the end of fiscal year 2013.).

We will continue to strengthen the patent portfolio by promptly filing patent applications concerning our research and development works and by making efforts to reliably acquire patents for pending applications.



**Fig. 10** Protein A resin (KANEKA KanCapA™)

## 9. Intellectual Property Portfolio Policies

**We hold that the pivotal issue for maintaining the cycle of intellectual property creation, protection, and utilization is management of intellectual property portfolios.**

In the case of KANEKA, the key to intellectual property portfolio management is building up a strong patent portfolio that contributes to our operating revenue, based

on strong patents whose rights we can exercise.

In order to implement objective evaluation of the strength of the patents constructing our patent portfolio, we have been involved in joint research with Kobe University with the aim of quantifying prosecution history and bibliographic information of a patent for analysis.



### Branding Strategy of KANEKA Corporation

**We are working on the branding strategy as a part of portfolio management.**

**In 2012, we formulated our "Product Brand Management Guideline" by which we can demonstrate our originality so that KANEKA Corporation will become known among the people in the world.**

**At that time, each product had separate branding.**

**However, we greatly changed our policy to enhance the strength of the corporate brand "KANEKA".**

In order for expansions of KANEKA's products and businesses and the features of our products to be recognized at a glance in the global market and so that maximization of our brand power is achieved, we present the following approaches:

(1) We will avoid giving a unique name to each product and will aim, as a general rule, at giving products names containing both the KANEKA brand and our product descriptor (general descriptive term of the product).

(2) However, product branding may be performed for the following products in our existing businesses: highly recognized products; and products having a finished form and/or having a wide value chain.

We possess 211 trademark rights of the corporate brand "KANEKA" in 56 countries. In addition, we are proceeding with filing of trademark applications related to the fields of

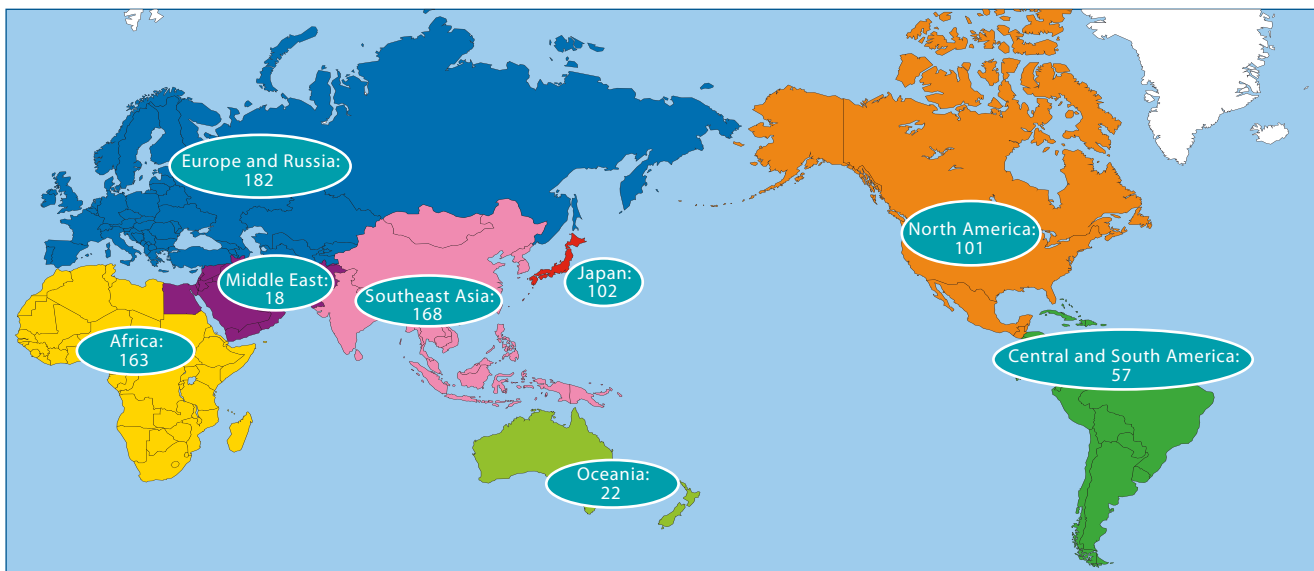
new products, including the field of organic EL lighting.

We instituted the Brand Consultation Desk, which is made up of staff from the Public Relations Department, the Intellectual Property Department, and the Corporate Planning Department, and we make it a rule to contact the Brand Consultation Desk at the time of product naming. This rule has been established to make sure that product naming is performed in accordance with the Product Brand Management Guideline.

### Existing Important Brands

Our "KANEKALON" products are an example of highly recognized products developed in our existing businesses. Since the 1960s, we have developed overseas business operations for our "KANEKALON" products mainly in the field of material fibers for wigs and hairpieces. We have achieved continual development of new products and maintained a high level of quality of "KANEKALON" products in order to enhance the brand power of "KANEKALON" products.

We possess 813 KANEKALON-related trademark rights in 103 countries. We are positively conducting trademark right acquisition in the African region, which is an important area for the rollout of the "KANEKALON" products (see Figure 11). "KANEKALON", "Afrelle", and "futura" are our important brand names.



**Fig. 11** Regional Status of Acquisition of KANEKALON-Related Trademark Rights

### Our Brand Protection System

In order to prevent our major brand names, including "KANEKA", from being registered by third parties via applications in bad faith, we are monitoring the progress of trademark registrations across the world.

In the event that we discover any third party's applications

in bad faith, we take an appropriate action, such as the filing of an opposition.

Against counterfeit products etc., we are taking measures to protect our brand names, e.g. by sending a letter of warning.



## 10. Information on Handling Risks (Current State of Exercise of Rights)

**To prevent disputes with other companies, KANEKA always conducts a patent search during presentation of any new theme, proposal for new business, change in specification, and other suitable occasions, and secures patent clearance.**

**In addition, when necessary, we make use of advice from outside specialists to adopt the safest policy based on comprehensive judgment.**

**On the other hand, we make it a policy to firmly stand against and promptly deal with any act of patent infringement or imitation by other entities, including with patent infringement lawsuits.**

The patent infringement case filed by KANEKA Corporation in the Federal District Court, Central District of California on March 22, 2011 regarding one of our U.S. patents concerning the manufacturing process of an oxidized form of Coenzyme Q10 was reopened following the the decision made by the U.S. International Trade Commission (ITC). However, as with the ITC's decision, the judge of the District Court unjustly made a narrow interpretation of the scope of patent protection of our patent and made a summary judgment that the defendant had not infringed our patent. Dissatisfied by this decision, we filed an appeal with the United States Court of Appeals for the Federal Circuit (CAFC) on April 2, 2014.

Further, another patent infringement case is in dispute in the Federal District Court, Southern District of Texas. This case was asserted as a counterclaim against a declaratory judgment action filed by some of the defendants of the above patent infringement case in which they asked the Court to verify their claims of noninfringement on their part and invalidity of our patent.

As for the patent infringement case filed in the Paris District Court, France on October 28, 2010 regarding one of our European patents concerning a manufacturing method of an oxidized form of Coenzyme Q10, the judge made a decision on May 30, 2014 to dismiss the lawsuit. We are now considering what actions we should take in the future.

On the other hand, the patent infringement case appealed in the Düsseldorf District Court, Germany on April 13, 2012 regarding the same European patent held by KANEKA Corporation remains pending.

The patent infringement case filed by KANEKA Corporation in the Federal District Court, Eastern District of Texas on July 26, 2010 regarding five of our U.S. patents concerning polyimide film products and relevant manufacturing methods was later transferred to the Federal District Court,

Central District of California. Although the court case was suspended due to the investigation made by the ITC, it was reopened on December 10, 2012. This case is still in dispute. The discovery was completed in June 2014, and we are now preparing for a jury trial that is scheduled to be held in February 2015.

As for the patent infringement case filed by KANEKA Corporation in the Federal District Court, Northern District of Texas on July 20, 2010 regarding two of our U.S. patents concerning flame retardant polyester fiber for artificial hair, a jury verdict was issued on June 28, 2013 in favor of our claim to recognize the fact of the defendant's patent infringement and our loss incurred as a result of that infringement, and to reject the defendant's argument against the validity of our patents. On November 5, 2013, the Federal District Court ordered the defendants to pay us a total of about six million U.S. dollars in compensation for loss in accordance with the jury verdict. Dissatisfied by the jury verdict, the defendants filed an appeal. This case is now pending in the CAFC.

On another front, in response to the request made by the defendants, the U.S. Patent and Trademark Office (USPTO) proceeded with an *inter partes* reexamination of these two KANEKA patents. On May 30, 2014, the Board of the USPTO found one of the two patents to have patent-ability. Dissatisfied by the finding, the defendants petitioned the USPTO for a rehearing. The *inter partes* reexamination for the other patent is still pending in the USPTO.

The following two Japanese lawsuits were filed against KANEKA corporation and remain pending.

(1) A lawsuit was filed in the Tokyo District Court on December 9, 2013 against KANEKA Corporation by an individual regarding KANEKA's patent application concerning the use of Coenzyme Q10 for feed. In the lawsuit, the plaintiff (the aforementioned individual) asks the Court to verify that the right to obtain a patent for the subject invention of KANEKA's patent application belongs to the plaintiff.

(2) A lawsuit was filed in the Tokyo District Court on February 28, 2014 against KANEKA Corporation by a company that plans to import and sell Coenzyme Q10 made in China, regarding KANEKA's Japanese patent concerning a manufacturing method of an oxidized form of Coenzyme Q10. In the lawsuit, the plaintiff asks the Court to confirm the absence of the right to demand an injunction for that patent.

We consider these lawsuits as groundless. We will handle the matter firmly.

### **Cautions Concerning Prospect**

Prospect, planning, policies, management strategies, determination of facts, descriptions concerning the future development, and items other than facts already realized are described based on forecasts, estimations, plans, etc. founded on the information we currently have.

In addition, when making a forecast, we use prescribed premises in addition to the facts already realized.

There is no guarantee that such premises are objectively correct or will be realized in the future.

The factors that affect the premises include technological and demand trends, the state of competition, the economic environment, fluctuation of the exchange rates, etc.

### **Policy Concerning Disclosure**

This company firmly maintains its policy not to disclose matters of major uncertainty in the future or details of its important strategies.

Accordingly, this material discloses no such matters.

# **KANEKA**

## **KANEKA Corporation**

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