



INTELLECTUAL PROPERTY REPORT
FY 2009

April 1, 2009 — March 31, 2010

Under the corporate slogan "Innovation by Chemistry," in April 2006 Toray Group formulated the "AP-Innovation TORAY21" long-term corporate vision. In keeping with this vision, Toray Group is rising to the challenge of innovation not only in technology but also in every aspect of our corporate activities, driven by our aspiration to become a "global top company of advanced materials." Subsequently, in October 2006 we commenced "Innovation TORAY 2010 (IT-2010)," a set of mid-term business strategies under which we have strived for further growth through innovation in working to realize our long-term corporate vision.

However, with the dramatic change in the business environment accompanying the severe global economic downturn since autumn 2008, Toray has thus focused on improving cash flows and securing earnings as its top-priority tasks. Accordingly, for the time being we have frozen the numerical targets of management resource allocation and earnings expansion that we set under IT-2010. Additionally, from April 2009 we have decided to focus on overcoming the economic crisis over the next two years under "Project IT-II," a new medium-term management program.

Under "Project IT-II," we are promoting three group-wide projects: Total Cost Reduction Project (TC Project), "Action Program for Survival" Project (APS Project) and "Action Program for Growth" Project (APG Project).

In promoting the APS Project and the APG Project, we believe that innovation of technologies through R&D activities will be indispensable. Therefore, we promote the strengthening of our intellectual property capabilities as a crucial theme of both projects because we believe that intellectual property capability is one of the keys to innovation of technologies through R&D activities.

With an increasing awareness that a corporate brand has a significant impact on corporate image and value, we will strengthen and maximize the value of our various brands, including the Toray corporate brand, which represent valuable intellectual property of Toray Group.

In line with efforts to strengthen our intellectual property capabilities, the Intellectual Property Division, which is an independent organization under the direct control of the President, controls the strategic intellectual property activities for the entire Toray Group.

In this manner, Toray Group is adopting a trilateral integrated approach that incorporates its business strategies, R&D strategies and intellectual property strategies. Concurrently, while continually working to raise Toray Group's corporate value, we will strive to realize our corporate philosophy of "Contributing to society through the creation of new value with innovative ideas, technologies and products."

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Overview of Toray Group

■ Corporate Outline (as of March 31, 2010)

- Name: Toray Industries, Inc.
- Established: January 1926
- Paid-in Capital: ¥96,937 million
- No. of Group companies: Parent company and 139 consolidated subsidiaries (61 Japanese and 78 overseas consolidated subsidiaries)
- No. of employees: 37,936 (consolidated), 6,915 (non-consolidated)

■ Corporate Philosophy

Corporate Philosophy
 Contributing to society through the creation of new value with innovative ideas, technologies and products



Corporate Guiding Principles

Safety and Environment	Placing top priority on safety, accident prevention and environmental preservation, ensuring the safety and health of our employees, our customers and local communities, and actively promoting environmental preservation
Ethics and Fairness	Obtaining the trust of society and meeting the expectations by acting fairly while maintaining high ethical standards and a strong sense of responsibility and maintaining transparency in management
Customer Focus	Providing customers with new values and solutions, and achieving sustainable growth together
Innovation	Achieving continuous innovation in all corporate activities, and aiming for dynamic evolution and growth
Fieldwork and Initiative	Strengthening fieldwork abilities and initiative, the foundations of our corporate activities, through consistent learning from one another and constant self-driven efforts
Global Competitiveness	Pursuing competitiveness through global top quality standards and cost management, and achieving growth and expansion in the global marketplace
Global Coalition	Developing global coalition through integrated internal linkages and strategic alliances with external parties
Emphasis on Human Resources	Providing an environment where employees find value in their work, and building positive, energetic relationships between people and the organization

Main Businesses

■ Fibers & Textiles

Filament yarns, staple fibers, spun yarns, woven and knitted fabrics of nylon, polyester and acrylics; non-woven fabrics; man-made suede, apparel products, etc.

■ Plastics & Chemicals

(Excludes films and plastic products included in IT-related Products segment, listed below)
 Nylon, ABS, PBT, PPS and other resins and molded products; polyolefin foam; polyester, polypropylene, PPS and other films and processed film products; raw materials for synthetic fibers and plastics; zeolite catalysts; pharmaceuticals and agrochemical intermediates and other fine chemicals; veterinary medicines, etc.

■ IT-related Products

Films and plastic products for information- and telecommunication-related products; electronic circuit materials and semiconductor-related materials; LCD color filters and its related materials and equipment; materials for plasma display panels; magnetic recording materials; graphic materials and IT-related equipment, etc.

■ Carbon Fiber Composite Materials

Carbon fibers, carbon fiber composite materials and their molded products.

■ Environment & Engineering

Comprehensive engineering; condominiums; industrial equipment and machinery; environmental equipment; water treatment membranes and related equipment; materials for housing, building and civil engineering applications, etc.

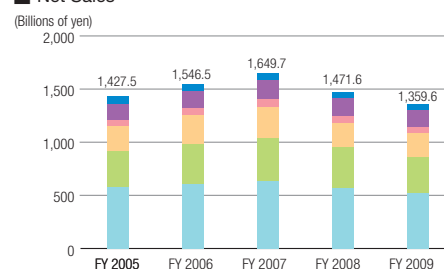
■ Life Science

Pharmaceuticals; medical products.

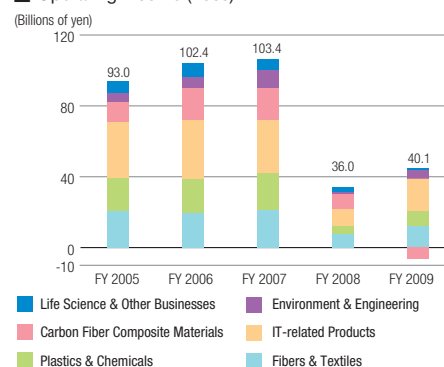
■ Others

Analysis, physical evaluation and research services.

■ Net Sales



■ Operating Income (Loss)



Core Technologies and Management Strategies

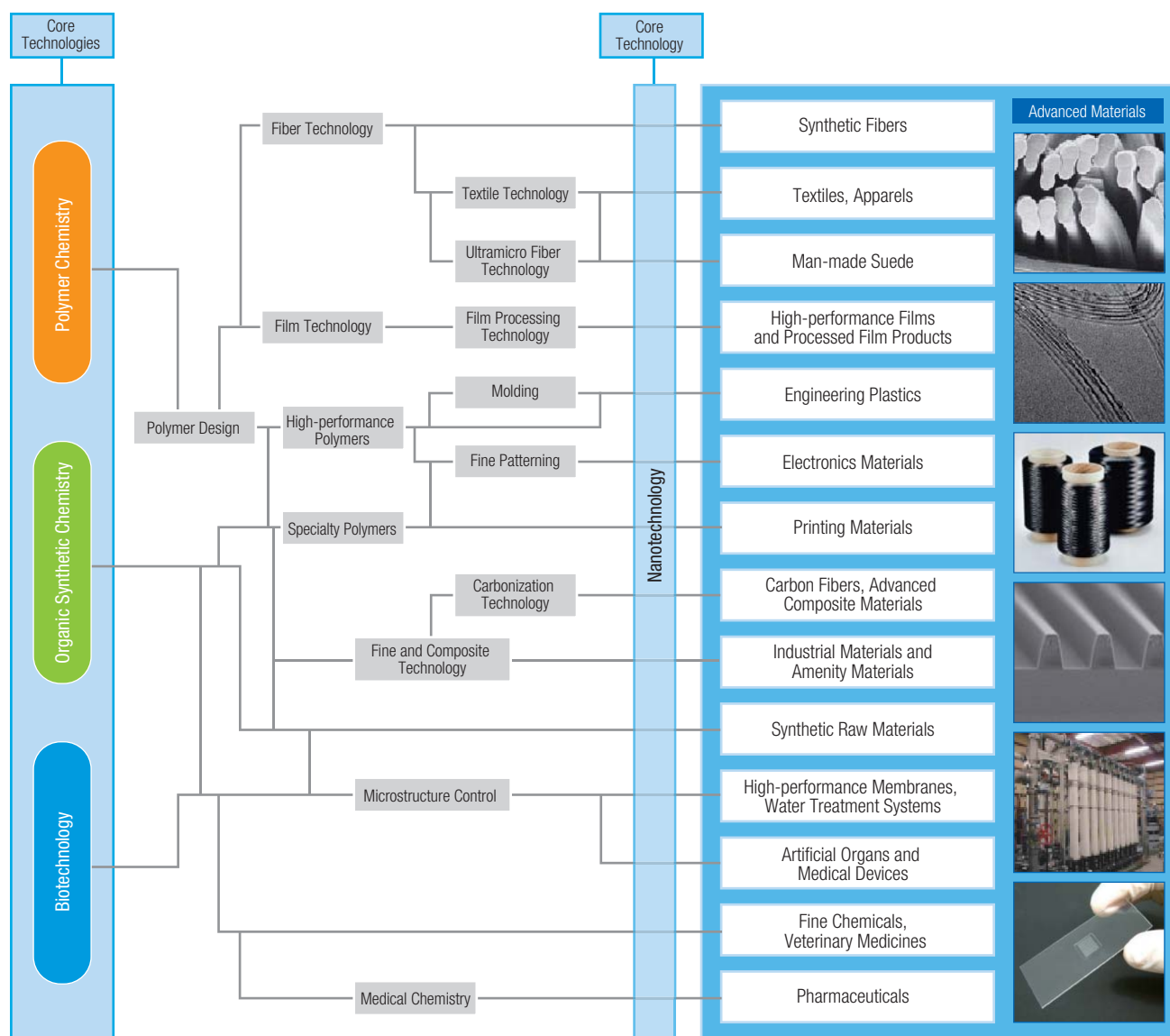
1 Core Technologies

Since its foundation, Toray has cultivated "polymer chemistry," "organic synthetic chemistry" and "biotechnology" as core technologies. While developing these technologies, we have constantly expanded our businesses from fibers and textiles to films, chemicals and plastics. We have also developed businesses in the fields of electronics & information materials, carbon fiber composite materials, pharmaceuticals, medical products and water treatment. With the recent addition of "nanotech-

nology," we are now utilizing our four core technologies to develop and commercialize a diverse array of advanced materials for a wide range of industries.

Under the corporate slogan "Innovation by Chemistry," Toray will continue striving to contribute to society through the creation of new value by using its four core technologies and their integrated technologies.

Toray Technologies and Businesses



2 Management Strategies

In April 2006, when it marked its 80th anniversary, Toray Group formulated "AP-Innovation TORAY21," a long-term corporate vision that encapsulates our fervent aspiration to be a "global top company of advanced materials." In October 2006, Toray commenced "Innovation TORAY 2010 (IT-2010)" as its new mid-term business strategies through which it will take on the challenges of achieving new growth through innovation. Under IT-2010, Toray aims for transformation to a highly profitable business group and to actively expand our advanced material businesses across four major growing business fields of 1) Information, Telecommunications and Electronics; 2) Automobiles and Aircraft; 3) Life Science; and 4) Environment, Water-related and Energy.

Nonetheless, the sharp and significant decline in global demand from autumn 2008 had an extremely large impact on Toray Group, and executing urgent measures for responding to the drastically changing business environment became a top-priority task. Therefore, during the two-year period spanning FY 2009 and FY 2010, Toray Group is concentrating on overcoming the economic crisis and formulated "Project

IT-II (Innovation TORAY II)" as the basic strategies spearheading these efforts, which was launched in April 2009.

Under "Project IT-II," we will firmly adhere to our basic principle of "protecting the employment" of our employees as part of our corporate social responsibility as a major Japanese corporation. Other than this, we are quickly taking drastic measures to improve profitability, with no areas exempt from these initiatives. Specifically, we are implementing three group-wide projects: Total Cost Reduction Project (TC Project), "Action Program for Survival" Project (APS Project) and "Action Program for Growth" Project (APG Project). In executing these projects, we are focusing on drastic total cost reductions, profit maximization by comprehensively ensuring sales through every possible effort, optimization of the scale and systems of businesses in response to structural changes in the business environment, in-depth reduction of capital expenditures and working capital, and promotion of growth strategies to prepare for new future growth following the economic crisis.

■ Long-term Corporate Vision and Mid-term Business Strategies

Long-term corporate vision

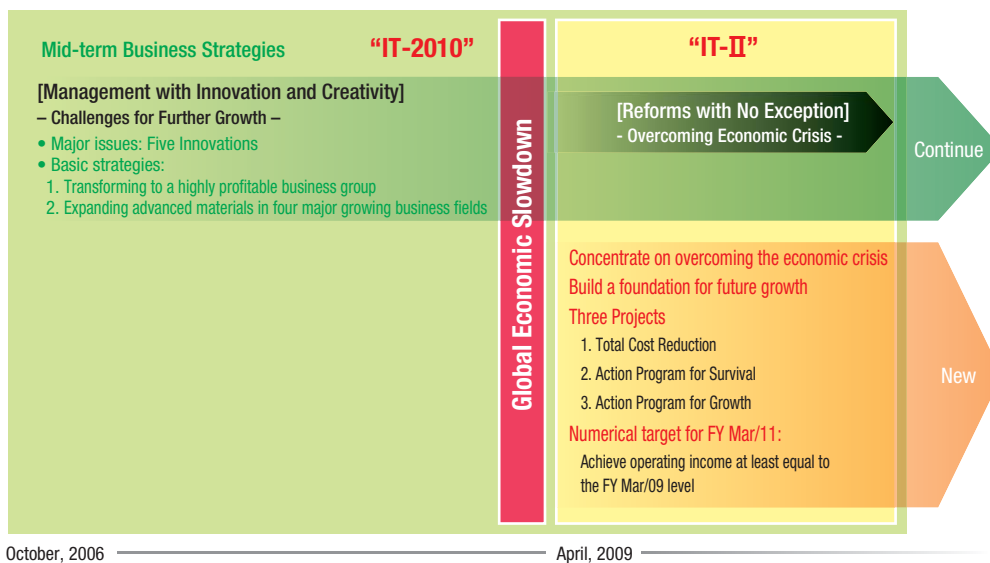
"AP-Innovation TORAY21"

Corporate image of Toray Group in the 21st century

Corporate Slogan "Innovation by Chemistry"

"Toward a Global Top Company of Advanced Materials"

Continue



I Core Technologies and Management Strategies

In parallel, with a view to future socioeconomic structural changes, we will promote our growth strategies from the standpoint of providing solutions to constraining factors on future economic growth such as “environmental issues,” “resources and energy” as well as from the perspective of capturing the growth potential of Asia, an enormous

growth market. By successfully completing “Project IT-II,” Toray Group will steadily lay the foundation for further development as a highly profitable business group that achieves continuous growth after overcoming the economic crisis while forging a new future in which we aim to become the world’s top company in advanced materials.

■ Solution Proposal to Constraining Factors on Economic Growth

Constraints	Solutions	Toray Group Products (Examples)		
		Latest (~ 2010)	Medium-term (~ 2015)	Long-term (~ 2020)
Preservation of global environment (CO ₂ emission reduction, etc.)	Energy conservation	CFRP for aircraft	CFRP for automobiles	
	Low environmental burden	Special PP film for hybrid cars	Energy-saving process with membranes	High-insulating film/foam
		Halogen-free flame retardant resin/film	Paintless, surface decorating film Waterless printing plate	High-performance heat-transfer element
	Air-purification	Air filter	Bag filter	
Depletion of fossil resources and energy	New energy resources	Back sheet of solar cells	CFRP for wind turbine generator	Solar cells manufacturing equipment
		Electrode substrate of fuel cells	Lithium-ion battery manufacturing equipment Lithium-battery separator	Electrolyte membrane of fuel cells
	Recycling	Recycled raw material	Carbon fiber recycling	
	Biomass	Polylactic acid	Thermoplasticity cellulose fiber	Bio-process with membranes
Securing of water resources / food stocks	Water treatment	RO membrane element and system		Non-edible biomass polymer
		Hollow-fiber membrane module	MBR membrane module	High virus-removable hollow-fiber membrane
				Hybrid seawater desalination/NF membrane
Aging population with declining birthrates	Curbing medical expenses	Hemodialyzer	Oral antipruritus drug	Urinary incontinence curative drug
	QOL improvement	Blood purification device	DNA chip	Chronic c-type hepatitis curative drug
		Air filter	Protein analyzing chip	Inflammatory bowel disease curative drug
			Leukocyte removal column	Drug delivery system

1 Basic Strategies by Business Categories

Toray Group divides its business operations into three categories—Foundation Businesses, Strategically Expanding Businesses and Strategically Developing Businesses—and has set clear basic strategies for each category.

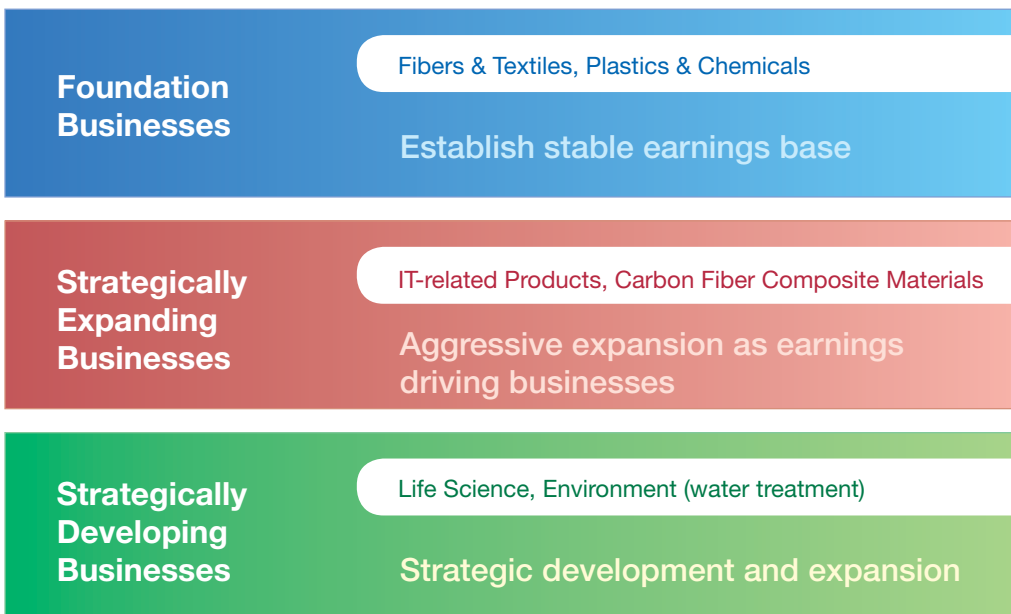
In the Fibers & Textiles and Plastics & Chemicals segments, positioned as Foundation Businesses, we are targeting global expansion, pioneering of new products and new distribution channels, and the promotion of downstream and processing business development to establish a stable earnings foundation.

In the IT-related Products and Carbon Fiber Composite Materials seg-

ments, positioned as Strategically Expanding Businesses, we will strive for business expansion in growing markets, such as information and telecommunications, electronics, automobiles and aircraft.

Positioned as Strategically Developing Businesses are the Life Science (including pharmaceuticals, medical products and bio-tools) and Environment (centering on water treatment) segments. We are strategically cultivating and expanding these businesses as part of efforts to build these businesses into the next pillars of earnings expansion after the Strategically Expanding Businesses.

■ Overview of Business Categories



2 R&D Segments

The research and development activities of Toray Group are divided into seven segments, one for each business domain, as follows: Fibers & Textiles; Resins & Chemicals; Films; Electronics & Information Related Products; Carbon Fiber Composite Materials; Life Science (pharmaceuti-

als and medical products); and Water Treatment.

The “Business Categories, R&D Segments and Business Segments” chart shows the relationship between business categories and R&D/business segments.

Relationship between Business Categories and R&D/Business Segments

Business Categories	R&D Segments	Business Segments	Basic Materials	Advanced Materials
Foundation Businesses	Fibers & Textiles	Fibers & Textiles	Synthetic Fibers Resins Chemical Materials Films	High Function Fibers & Textiles
	Resins & Chemicals Films	Plastics & Chemicals		High Function Resins Functional Particles High Density Recording Materials High Function Films Display Materials Semiconductor-related Materials
Strategically Expanding Businesses	Electronics & Information Related Products	IT-related Products		Carbon Fiber Composite Materials
	Carbon Fiber Composite Materials	Carbon Fiber Composite Materials		Pharmaceuticals and Medical Devices Bio-tools
Strategically Developing Businesses	Life Science	Life Science		High Function Separation Membranes, etc.
	Water Treatment	Environment & Engineering		

II Business Strategies and R&D Strategies

3 Scheme for R&D and Commercialization

Toray has consistently created and commercialized numerous advanced materials by utilizing strengths in R&D that include its 1) history and culture of creating innovative technologies (emphasis on basic research); 2) numerous specialist organizations; 3) integrated research and technological development organization; 4) technological integration through industry-government-academia joint research; and 5) advanced analytical capabilities (strong links to the Toray Research Center Inc.).

To fully utilize these strengths, since 1985 Toray has been building a "research and technological development organization centering on the Technology Center." The role of the Center is to plan company-wide strategies and key projects for research and technological development.

Each research and technological development department conducts research and development in its own responsible area. At the same time, they collaborate with each other and integrate their technologies across divisional boundaries in order to promote innovative research and deepen and deploy fundamental technologies, find solutions to urgent issues and take other pertinent actions. Additionally, utilizing high-caliber personnel, the development of global research bases is underway to further strengthen collaborations with advanced users and

leading-edge research institutions worldwide.

To speed up all processes, from development to commercialization, we will enhance functions to support processing technologies, facilities and equipment technologies and project management for our vital projects and combine the overall strengths of the Technology Center as we progress with the creation of large-scale businesses.

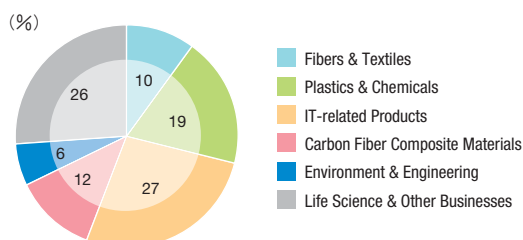
Moreover, under "Project IT-II," as part of initiatives in the "Action Program for Survival" Project (APS Project), we are concentrating our competitive strengths and promoting projects integrating research and development, marketing and sales and production in each business division. By doing so, we are accelerating development themes that will contribute to profits at an early stage. Additionally, as initiatives in the "Action Program for Growth" Project (APG Project), we are making preparations for the future in which we accurately grasp major transformations in the 21st-century industry as well as the tectonic shift toward emphasis on "the environment, resources and energy" by collaborating with and combining and integrating the overall strengths of the Technology Center.

4 R&D Expenditures

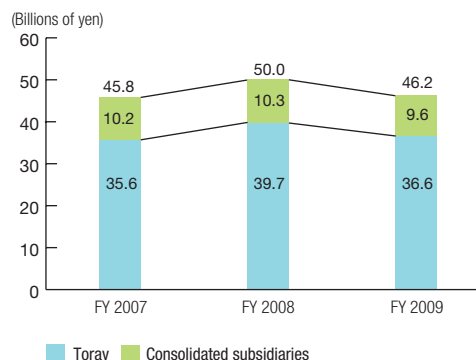
In FY 2009, Toray Group R&D expenses amounted to ¥46.2 billion (total R&D expenses of Toray parent company were ¥36.6 billion). By business segment, we allocated approximately 10% of these expenditures to Fibers & Textiles, approximately 19% to Plastics & Chemicals, approximately 27% to IT-related Products, approximately 12% to Carbon Fiber Composite Materials, approximately 6% to Environment & Engineering and approximately 26% to Life Science & Other Businesses.

Composite Materials, approximately 6% to Environment & Engineering and approximately 26% to Life Science & Other Businesses. Of Toray Group's 3,000 employees engaged in R&D, we will assign around two-thirds to work in advanced materials.

■ FY 2009 R&D Expenses by Business Segment



■ R&D Expenditures (past three years)

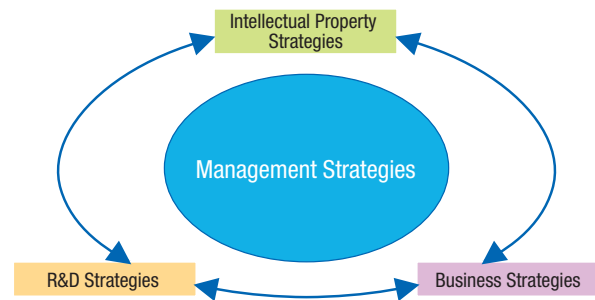


1 Basic Policies on Intellectual Property

Toray has formulated and executes the following four intellectual property strategies as its basic policies on intellectual property.

(1) Intellectual property strategies, as a part of the strategy trinity, that conform to management principles

Toray regards intellectual property as one of its vital management resources. Based on this rationale, we believe that any intellectual property strategy cannot exist in isolation from business strategies and R&D strategies and that all three strategies must thus be mutually and organically integrated. Therefore, Toray has designated its intellectual property strategies as one of the most important elements of its management strategies.



(2) Promoting the procurement of rights

In terms of intellectual property, it is necessary to actively acquire patent rights to protect our products and technologies and ensure profits. Therefore, holding as many useful patent rights as possible and building

patent portfolios are our most important tasks. At the same time, we also pay close attention to the efficient acquisition of patent rights by raising the quality of each patent and not making needless applications.

(3) Respecting the rights of others

Executing business while infringing on the patent rights of other parties is not legally permissible. In keeping with the spirit of adhering to such related laws and ordinances, for many years Toray has operated a system for comprehensively investigating the relations between its own

products and technologies and the patents owned by other companies, and thoroughly educates employees to prevent infringement on the patent rights of other parties.

(4) Rightful enforcement of our own rights

When Toray's patent rights are infringed upon by another party, we take proper steps by exercising our patent rights. We not only claim that infringement be ceased, but depending on the circumstances we

also receive monetary profits from licensing as well as use our patent rights for cross-licensing with the patent rights of other parties.

2 Reinforcing Patent Applications and Rights in Line with Our Business Strategies

Toray Group focuses concerted efforts on obtaining patents in all of its R&D segments, with the key focus on advanced materials. This is particularly true of the Strategically Expanding Businesses and Strategically Developing Businesses, positioned as drivers of medium-term and long-term earnings growth, with vigorous patent applications filed both in Japan and overseas.

Toray has conventionally concentrated its patent applications and procurement of patents on synthetic fibers, films and engineering plastics in the basic materials businesses, which have led to high market share and profitability.

At present, we are enhancing our patent applications and procurement of important patents in advanced materials expected to expand in the four major growing business fields of Information, Telecommunications and Electronics; Automobiles and Aircraft; Life

Science; and Environment, Water-related and Energy as well as in the business fields, such as "environmental issues" and "resources and energy" where we are promoting expansion from the perspective of providing solutions to constraining factors on future economic growth. We consider this strategy instrumental in supporting our growing business fields over the years to come.

To firmly protect each of Toray Group's businesses carried out globally, we have been strengthening our filing of patent applications overseas, especially since FY 2006.

Moreover, to attain the objectives of the strategies of "Project IT-II" set to overcome the economic crisis, from FY 2009 we are undertaking the following measures to continue enhancing efficiency and strengthen our patent capabilities.

3 Selection and Concentration in Patent Administration

In the course of shifting to a "Selection and Concentration in Patent Administration" policy, Toray has designated "Rank-A Projects" as top-priority issues in the administration of patents. Under this approach, we appoint a leader and supervising executive for each project and provide additional support through regularly scheduled follow-ups by technical division executives.

The following three "Rank-A Projects" categories are currently being pursued.

- (1) "Rank-A Patent Procurement Projects," with the objective of establishing patent portfolios for new technologies and related peripheral technologies through applications and procurement of patents;
- (2) "Rank-A Defense Projects," targeting early clarification of relations with patent rights owned by other companies that are influential on Toray's important research and technology development, and prompt determination of countermeasures to address patents

of other companies having a major impact on Toray's business; and

- (3) "Rank-A Rights Enforcement Projects," structured to cope with infringement of Toray patents by other companies through proper enforcement of Toray's rights, efforts to curb such infringement by other companies, and to obtain rightful compensation for practice of Toray's patented inventions by other companies.

Rank-A Projects are established in many technologies in major fields which are typified by advanced materials businesses in the four major growing business fields.

In filing new patent applications, including those covered by the Rank-A Projects, we stringently select inventions to file that can make contributions to the Company's business by means of strengthening collaboration between technical and/or sales and marketing departments, and the Intellectual Property Division.

4 Reinforcing Intellectual Property Capabilities

To the present, Toray Group has been "reinforcing its intellectual property capabilities" through initiatives to strengthen its research and technology foundation and has implemented such measures as increasing incentives, improving the quality of patents and enhancing and

strengthening patent education.

Additionally, in executing comprehensive cost reductions under "Project IT-II" started from FY 2009, we are adopting new initiatives for reducing costs and strengthening our patent capabilities.

(1) Increasing incentives for inventions

For invention incentives, Toray has long maintained a compensation system for employee inventions. This system includes fixed-sum compensations at the time of patent application and registration (including overseas patents in both cases) and performance compensations based on profits through the use of patented inventions and license fees.

However, we have revised these internal rules to effectively respond to the amended Patent Law as well as recent trends in court rulings in areas concerning employee inventions. Through this type of flexible

internal system, we are raising incentives for inventions to promote the creation of excellent inventions and thereby enhance the Company's competitiveness.

In FY 2006, we established an award system for not only inventors but also others in Toray who make a valuable contribution to patent-related activities. We expect that our multifaceted system of incentives will lead to further vitalization of activities related to intellectual properties.

Many of the affiliated companies have a similar compensation system.

(2) Improving the quality of patents

With a view toward the strict judgments rendered by courts and the Patent Office concerning inventive steps and quality of disclosure of patent specifications, Toray believes that high-quality patents should have both patentability that can stand up to such judgments and ease of enforcement at the same time. From this viewpoint, Toray not only conducts thorough prior art searches before filing patent applications, but also it provides inventors with opportunities to communicate with patent practitioners to perfect patent application documents, and with various tools to facilitate improvements in the quality of the documents.

For example, from FY 2006, prior art searches are undertaken by patent searchers assigned to technical departments charged with the primary role of patent searches.

Of particular note, in FY 2009 and FY 2010, we have been enhanc-

ing education of the patent searchers and building a database for sharing know-how in performing searches more efficiently and will thereby stringently select inventions for which to file patent applications based on their ability to stand up to the strict judgments of the Patent Office.

Our efforts extend beyond merely raising the quality of each individual patent and we have formulated and utilize the Manual for Building a Patent Portfolio that condenses know-how for raising the quality of the overall patent portfolio for protecting a specific theme.

To promote advantageous business development through the effective use of Toray's patents when another company enters one of our markets, we are building a patent database arranged by product so that sales and marketing departments can easily ascertain Toray patents that could be used to defend against the entry of competitors.

III Toray Group Intellectual Property Strategies

(3) Enhancing patent education

Multifaceted and multilevel education in patents is given to general managers through to new employees and frontline sales staff, with the aim of improving patent-consciousness and fostering practical skills of staff in the sales and marketing and technical departments. To ensure the efficacy of this patent education, we conduct annually a Patent

Operational Assessment Qualification Test for researchers and engineers. The test objectively assesses their legal knowledge of patents as well as practical skills. The results of the tests are reflected in the performance evaluations of employees working in technical areas.

5 Brand Strategy

In proactively undertaking its corporate brand strategy, Toray Group exercises strict control over all intellectual properties that symbolize Toray Group corporate activities. The intellectual properties include the "Toray Industries, Inc." company name, the "TORAY" corporate symbol, the "Toray" business trademark and the corporate domain names such as "toray.co.jp" and "toray.com" which represent the significance of our corporate existence and our originality.

Toray Group strives to elicit accurate social evaluations of its corporate image in order to raise its aggregate corporate brand value, with the aim of enhancing employee engagement and customer confidence and bolstering its ability to attract outstanding personnel.

To this end, we pursue the following three initiatives.

- (1) Enhance employee brand awareness and employee loyalty.
- (2) Strengthen and appeal our corporate brand and corporate image externally.
- (3) Clarify corporate brand targets and coordinate business domain brands and product brands.

The corporate symbol "TORAY", denoting the drive and spirit of Toray Group, expresses the Company's willingness to communicate with internal and external members, together with its aspiration to excel as a distinctive presence within society. This symbol is registered as a trademark for the primary businesses of Toray Group in over 150 countries

around the world for which we have established exclusive use rights. We have also adopted stringent defensive measures to deal with unauthorized use by third parties.

One of our missions is to forge a broad understanding by society of Toray Group's goals in preserving the global environment and contributing to the creation of a recycling-oriented society. To this end, we have established **ecodream** as a brand encompassing all of our business activities, products and services linked to the environment and recycling. Toray Group makes concerned efforts together to enhance environmental preservation activities.

In our quest to become a "global top company of advanced materials," we have also established **TOREX** as a brand expressing the promise of high quality and grade mainly for advanced materials in the area of fibers and textiles. We are actively utilizing and expanding this brand.

Toray Group has obtained and is properly managing some 1,200 product brands that are protected by approximately 8,500 trademark rights. In all of our businesses, we actively promote product brand strategies as an important part of strengthening our business foundation.

A collection of the Company's logos for our main products is shown below.



torayvino



Lumirror®

TOYOLAC®

TORELIEF®

3D-Gen®

IV

Analysis of the Marketability and Competitive Advantages of Technologies



Innovation by Chemistry

With "Innovation by Chemistry" as its corporate slogan, Toray Group rises to the challenge of creating innovative new materials and technologies while promoting innovation in all of its business activities including R&D in aiming to become a global top ranked business group at the leading edge of industry through its strength in advanced materials.

As evidence of this commitment, Toray has introduced new product lines that have emerged as Foundation Businesses for synthetic fibers, high-performance films, engineering plastics and other products. We have likewise extended product lines that have forged new businesses

in carbon fiber composite materials, electronics & information materials, printing materials, water treatment and medical high-performance membranes, fine chemicals, pharmaceuticals and veterinary medicines.

In these businesses, we are striving to expand supplies of advanced materials to our four major growing business fields of Information, Telecommunications and Electronics; Automobiles and Aircraft; Life Science; and Environment, Water-related and Energy. Moreover, utilizing Toray Group's total capabilities, we are striving to achieve growth by providing solutions that address the constraining factors of economic growth—preservation of the global environment, depletion of energy and other resources and aging population with declining birthrates—which have become increasingly evident amid ongoing socioeconomic structural changes.

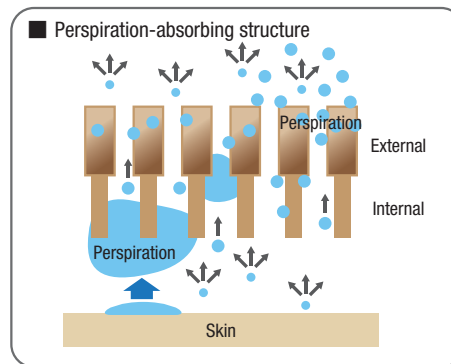
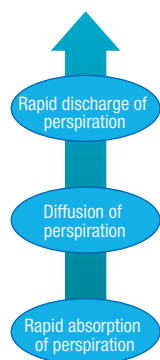
1 Fibers & Textiles

Toray has built a solid position in the Fibers & Textiles field, supplying a host of products—from filament yarns and staple fibers of three major synthetic fibers (nylon, polyester and acrylic) to textiles—for a wide range of applications from apparel to industrial. Determined to help prevent global warming and promote countermeasures for the depletion of resources, in recent years Toray has progressed with the development and commercialization of "polylactic acid" products and other non-petrochemical-based materials.

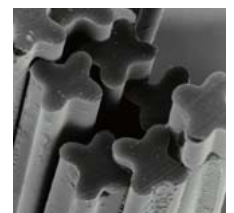
In new products, Toray and Aoyama Trading Co., Ltd. have jointly developed MYSTERYDRY*, a line of dress shirts with high perspiration-absorbing, quick-drying performance capabilities utilizing the CUBICSENSOR*, a special water-absorption structural material deploying a modified cross-section fiber. We added POLYPHONIC* NP, which can be dyed at atmospheric pressure levels, to our POLYPHONIC* series of cationic dyeable polyester filament products that feature vivid chromogenics and high color fastness. Since regular polyester has a polymeric molecular structure that is extremely rigid and tough, dyeing must be performed within a

closed system under high pressure at the high temperature of 130°C. On the other hand, with POLYPHONIC* NP, we utilized Toray's unique polymer modifying technology to control the molecular structure to enable dyeing at temperatures below 100°C under atmospheric pressure. As a result, POLYPHONIC* NP can be easily combined with numerous materials such as nylon, wool, polyurethane and lyocell, and fabric designs for apparel can be significantly expanded.

■ CUBICSENSOR*'s Perspiration-absorbing Quick-drying Mechanism



Atypical cross-section fiber
Electron microscope photograph



2 Resins & Chemicals

In plastic resins and chemicals, Toray has exploited advances in polymerization and molecular designs, polymer alloys, polymer processing and other fundamental technologies to achieve excellent performance and function in ABS (acrylonitrile-butadiene-styrene), nylon, PBT (polybutylene-terephthalate), polyphenylene sulfide, liquid-crystalline polyester and other engineering plastics. This is paving the way for the use of such plastics in information and telecommunication devices, as well as automobile parts. Meanwhile, to respond to environmental concerns, we are focusing on the development of technologies that help curb global warming and solve the problem of resource depletion.

As a recent achievement, we created a new PBT flowability enhance-

ment technology, for which we comprehensively examined and achieved advanced integration of our unique polymer design technologies, nano-order polymer structure control technologies and melt-blending technologies. We commenced full-scale sales of this technology as the TORAYCON* NANOFLOW* series. This technology for flowability enhancement is expected to help realize thin-walled components and the design of products with complex shapes in addition to reducing greenhouse gasses (GHG) and conserving energy by shortening the molding cycle and reducing molding temperatures. Toray is also active in biomass-based polymers. By applying our unique technology to plant-derived polylactic acid (PLA), we succeeded in develop-

IV Analysis of the Marketability and Competitive Advantages of Technologies

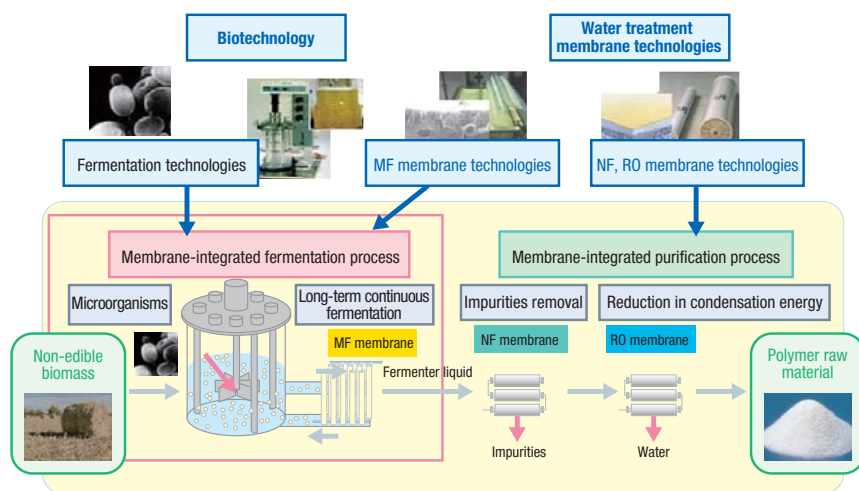
ing ECODEAR*, a biomass plastic that boasts the world's highest level of flame resistance, with more than 25% of its weight consisting of plant-derived ingredients. We are promoting applications such as exterior components for multifunctional office copiers.

We are also working on the development of synthesis methods for polymer raw materials from non-edible biomass by using microorganisms. In this research, the fusion of Toray's biotechnologies and water treatment membrane technologies allow us to realize dramatically improved fermentation efficiency (long-term continuous fermentation and elevated fermentation speed) and remarkable energy savings in refining (impurities removal and condensation process). In the future, we will proceed to develop a conversion process for non-edible biomass into sugar on a practical scale and contribute to expanding our business in environmentally-friendly products.

Utilizing a new synthesis method, we are working toward the mass production of a high-purity,

double-walled CNT (carbon nanotube) and are considering application in Toray's advanced materials such as transparent conductive films.

Bioprocesses that Apply Separation Membranes for Water Treatment



3 Films

In films, Toray was the first in Japan to commercialize biaxially oriented polyester film and has been leading the world in the field of high-performance and high-function films by advancing the technologies of the polyester film together with biaxially oriented polypropylene film. We are also the global pioneer in the development and commercialization of biaxially oriented polyphenylene sulfide and aramid films. To date, we have utilized our original film thickness control technology; special stretching technology; surface forming technology backed by film laminating methods; coating, cleaning and static electricity control technologies; and nano-alloy technology. We have used these optimal functions to support various industrial applications in such areas as flat panel displays, packaging applications for retort foods and magnetic materials applications for computer memory backups.

In recent years, Toray has developed PICASUS*, a metallic luster film with precision layering of several hundred to several thousand layers of dissimilar polymers. Toray launched full-scale sales in FY 2008. Also, as

an environmental response, we utilized our high-function alloy element design technologies to develop a flexible PLA film that combines heat resistance, flexibility and transparency. This film is being used in such agricultural applications as fumigation sheets.

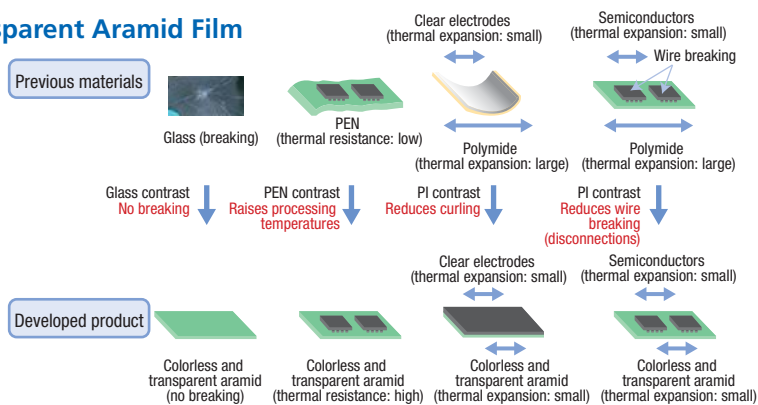
As a recent achievement, by combining newly developed "microcellular and nanocellular foam technologies" and our unique "gas barrier technologies," we developed an innovative thermal insulation foam sheet. This sheet uses carbon neutral plastic; PLA, yet simultaneously exhibits equal or better thermal insulating properties, durability and environmental performance compared with existing products.

By integrating polymer design technologies and film processing technologies, Toray succeeded in developing a non-halogen colorless and transparent aramid film that boasts the highest levels of flame resistance while offering superior rigidity and dimensional stability compared with previous materials. In this manner, we are progressing with the development of environmentally responsive products.

Characteristics of Developed Colorless and Transparent Aramid Film

Representative Characteristics of Colorless and Transparent Aramid Film

			New colorless and transparent aramid film	Reference
Thermal expansion coefficient	MD/TD	ppm/°C	-3/3	Low thermal expansion, can be controlled to -3 to 5
Modulus	MD/TD	GPa	10/10	High elasticity, MD-TD are balanced
Transmittance		%	89	A rate of 90% and higher is possible with an AR coat
Glass transition temperature		°C	315	



IV Analysis of the Marketability and Competitive Advantages of Technologies

4 Electronics & Information Related Products

In Electronics & Information Related Products, Toray mobilizes its fundamental technologies in such areas as polymer design of thermal resistance properties and optical functionality, organic synthetics, particle dispersion, thin layer-film forming and photolithography to develop semiconductor buffer coatings, insulator and flexible substrate materials for optical devices and packaging fields, high-k insulator materials, ceramic substrate materials, color filters for liquid-crystal displays (LCDs), plasma display rear panel forming technology and small-molecular organic electroluminescent (EL) light-emitting materials.

As an achievement in recent years in LCD materials, we integrated a newly developed light-shielding material and nanodispersion technologies that fully utilize the properties of this material to create black matrix resin materials that feature an extremely high level of light-shielding properties and improved adhesiveness.

Utilizing our proprietary plastic resin design technologies, we developed a coatable retarder material that can be shaped using only heat treatment and coating without requiring stretching and orientation processing.

Regarding semiconductor fields, in PHOTONEECE* positive tone photosensitive polyimide coating materials, which have applications as semiconductor buffer coatings, we developed the "PW-3000 Series"

by using our proprietary photo active compound gradient distribution technology. The PW-3000 Series offers both the world's highest-level photosensitivity and high dimensional stability.

In new products, we also developed RAYBRID*, a photosensitive functional material for electronic components mounted on mobile phones and other compact electronic devices. RAYBRID* distributes inorganic particles on photosensitive resin and enables the formation of thick films and detailed patterns. We commenced full-scale sales of RAYBRID* in 2009. Additionally, we developed and launched full-scale sales of UHF passive-type IC tags (RFID) for metal surfaces, which are thinly flexible by the shape of a sheet, which can carry out on-demand printing.

■ Passive-type IC Tags (RFID) for Metal Surfaces



5 Carbon Fiber Composite Materials

Toray Group is the world's largest manufacturer of carbon fibers and supplies carbon fibers and woven fabrics. We also supply intermediate materials such as prepregs and molding technologies of carbon fiber composite materials. Here, we target applications in the aircraft, sports equipment, civil engineering, construction, automobile, information devices and energy industrial instruments.

Carbon fiber composite materials (carbon fiber reinforced plastics (CFRP)) are recognized as advanced materials which have a quarter of the specific weight and 10 times the strength compared with steel. Due to such advantages, these materials are facing a period of drastic increases in demand. In the aircraft industry, carbon fiber composite materials have won high acclaim as the best-suited and most-effective materials for improving fuel efficiency by reducing weights.

CFRP are being used for more than 50% in weight of the new Boeing 787 commercial jet, including for the wings and fuselage. Additionally, we are currently carrying out joint development of a new molding technology for CFRP parts for use in the tail assembly on the Mitsubishi Regional Jet (MRJ) with Mitsubishi Heavy Industries, Ltd.

This new molding technology was suitable for realizing energy savings and low-cost processes compared with previous molding technologies. In contrast to these benefits, it also had the drawbacks of being limited to low-viscosity resin and was prone to a decrease in toughness. However, we were able to overcome these deficiencies by utilizing Toray's nano toughening technologies. Our new materials are satisfying the high-demand characteristics of main aircraft structures.

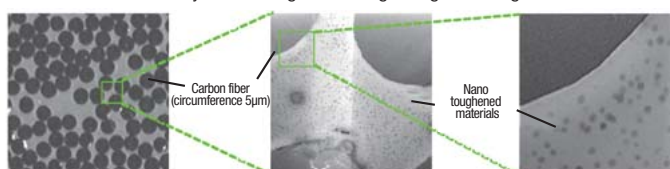
In the automobile industry as well, to contribute to the realiza-

tion of lighter vehicle bodies, in the national project "R&D of CFRP Materials to Reduce Automobile Weight," we developed a "short-cycle integral molding technology" that involves using CFRP to enable the front floor of an automobile platform to be produced within 10 minutes. Additionally, in the national project entitled "Development of Sustainable Hyper Composite Technology," we are progressing with technology development focused on using thermoplastic components, which have excellent recyclability, for outer panels, interior parts and secondary substructural parts.

Our R&D structure for strengthening these materials and molding technologies development is centered on the Automotive Center (AMC) and the Advanced Composite Center (ACC), which are development bases for the Automotive & Aircraft sector. Overseas, we have decided to establish a local development base for CFRP components in Europe as we progress with the development of CFRP components for automobiles under a global structure.

■ Nano Toughening Technologies

Realizing a large physicality improvement in low-viscosity resin through nano toughening technologies

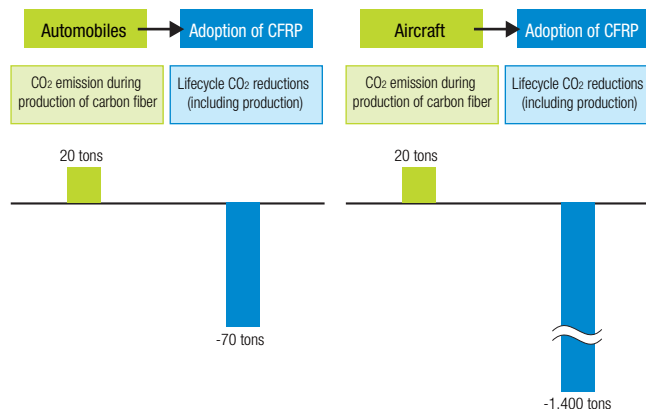


IV Analysis of the Marketability and Competitive Advantages of Technologies

To quantitatively assess carbon fibers as environmentally conscious materials, while collaborating with outside institutions, we implement Life Cycle Assessment calculations for CFRP-based automobiles and aircraft and have confirmed that carbon fibers are a type of material that significantly reduces CO₂.

Reductions in CO₂ Per Ton of Carbon Fiber

Model of The Japan Carbon Fiber Manufacturers Association



6 Life Science

In pharmaceuticals, Toray has commercialized the natural interferon beta preparation FERON* (based on biotechnology) and the world's first oral prostacyclin derivative preparation DORNER* (based on synthesis technology). In 2009, Toray had obtained manufacturing and marketing approval, and launched REMITCH® CAPSULES 2.5 µg (generic name: nalfurafine hydrochloride), an oral antipruritus drug for the indication of improvement of pruritus in hemodialysis patients (only for cases resistant to conventional treatments). Torii Pharmaceutical Co., Ltd. has commenced sales of this drug.

In medical products, our offerings include FILTRYZER*, TORAYSULFONE* (hemodialysis membranes with excellent biocompatibility and high efficiency) and TORAYMYXIN* (hemoperfusion absorption column for removing endotoxin). These unique products are earning high admiration for their quality and performance.

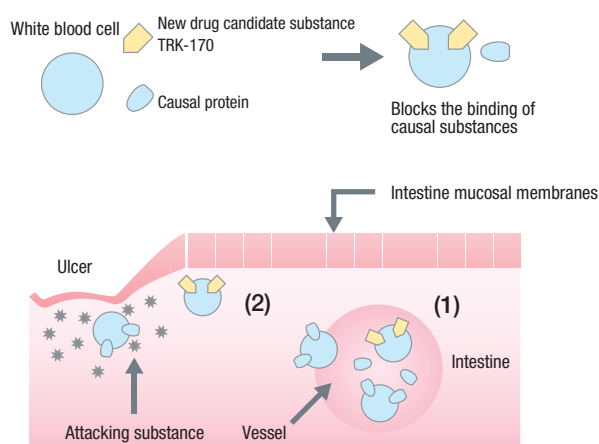
In recent years, we developed a new protein analysis chip for diagnostics that has a high degree of sensitivity to enable the easy detection of minute amounts of disease marker proteins in blood. We are progressing with the commercialization of this chip as a new biological device for supporting clinical diagnostics and bio research. The development of this chip follows the launch of our 3D-Gene* ultra-high sensitive DNA chip.

As a recent achievement, Toray has obtained approval in Japan to add a new indication to its natural-type interferon beta preparation FERON*, jointly developed and marketed with Daiichi Sankyo Company, Limited for the "improvement in hepatitis C virus viraemia of chronic hepatitis C on concomitant administration with ribavirin." As a result, FERON* is the first interferon beta preparation indicated for concomitant administration with ribavirin.

Meanwhile, Toray began Phase I clinical trials in Europe for the chemical compound TRK-170, which is expected to have therapeutic effects for inflammatory bowel disease (IBD). This compound has an action

that suppresses excess immune reaction, which is the cause of IBD, and also has a mechanism of action that differs from existing treatment agents. Therefore, this compound is expected to be even more highly effective. Additionally, we are continuing to focus on the development of new drugs, new diagnostic products and new analytical services, which includes the start of analytical service for canine cancer markers by affiliated company Kamakura Techno-Science Inc.

Mechanism of Action of New Drug Candidate Substance TRK-170



- (1) Prevents extravasation of white blood cells
- (2) Does not create substances that attack intestine mucosal membranes

IV Analysis of the Marketability and Competitive Advantages of Technologies

7 Environment

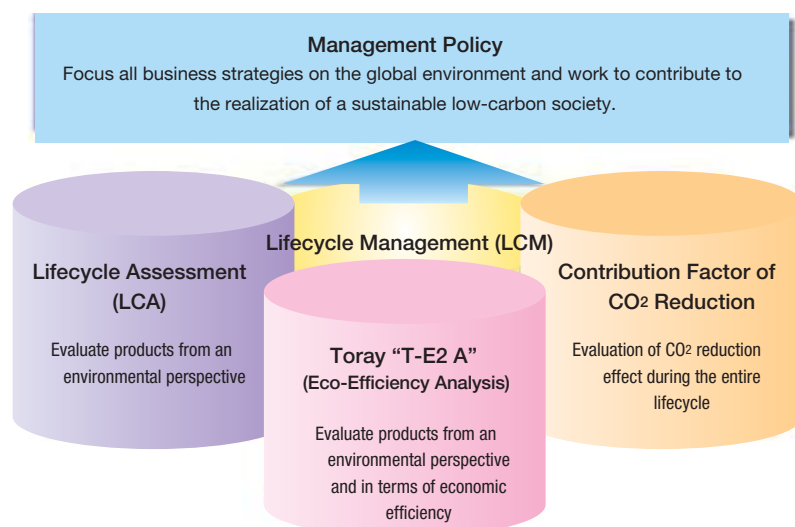
Toray views its products and services in terms of the entire lifecycle in all its industrial and business activities. Toray is promoting the project “EcoChallenge” and has adopted a rationale that emphasizes ascertaining the balance of CO₂ emissions and costs from the standpoint of the entire lifecycle of products and services and has introduced lifecycle management (LCM). Moreover, all our business strategies are focused on the global environment and we view eco-consciousness from a comprehensive perspective as we undertake “EcoChallenge,” which takes a progressive approach to resource conservation and preservation of the global environment, in working to realize a sustainable low-carbon society. In carrying out this project, we are also focusing on developing technologies that will help prevent global warming and solve problems related to resource depletion. Additionally, to smoothly promote LCM we developed “T-E2 A (Eco-Efficiency Analysis)” software, an analytical

tool, as we build an environment for efficiently gathering, accumulating and utilizing data.

In new energy resources fields, such as solar cell-related materials and technologies, we are progressing with diverse research focused on the cells, back sheets and other solar materials, and their related equipment. Regarding cells, we combined our core technologies of polymer chemistry and organic synthetic chemistry to develop a new polymeric donor material, which is a key material in organic thin-film solar cells.

We are also further accelerating our R&D on key materials for fuel cells and rechargeable lithium-ion batteries, which will be crucial components in next-generation automobiles. These efforts include the establishment of Toray Tonen Specialty Separator Godo Kaisha, a battery separator film joint venture with TonenGeneral Sekiyu K.K.

Toray's Lifecycle Management (LCM)



IV Analysis of the Marketability and Competitive Advantages of Technologies

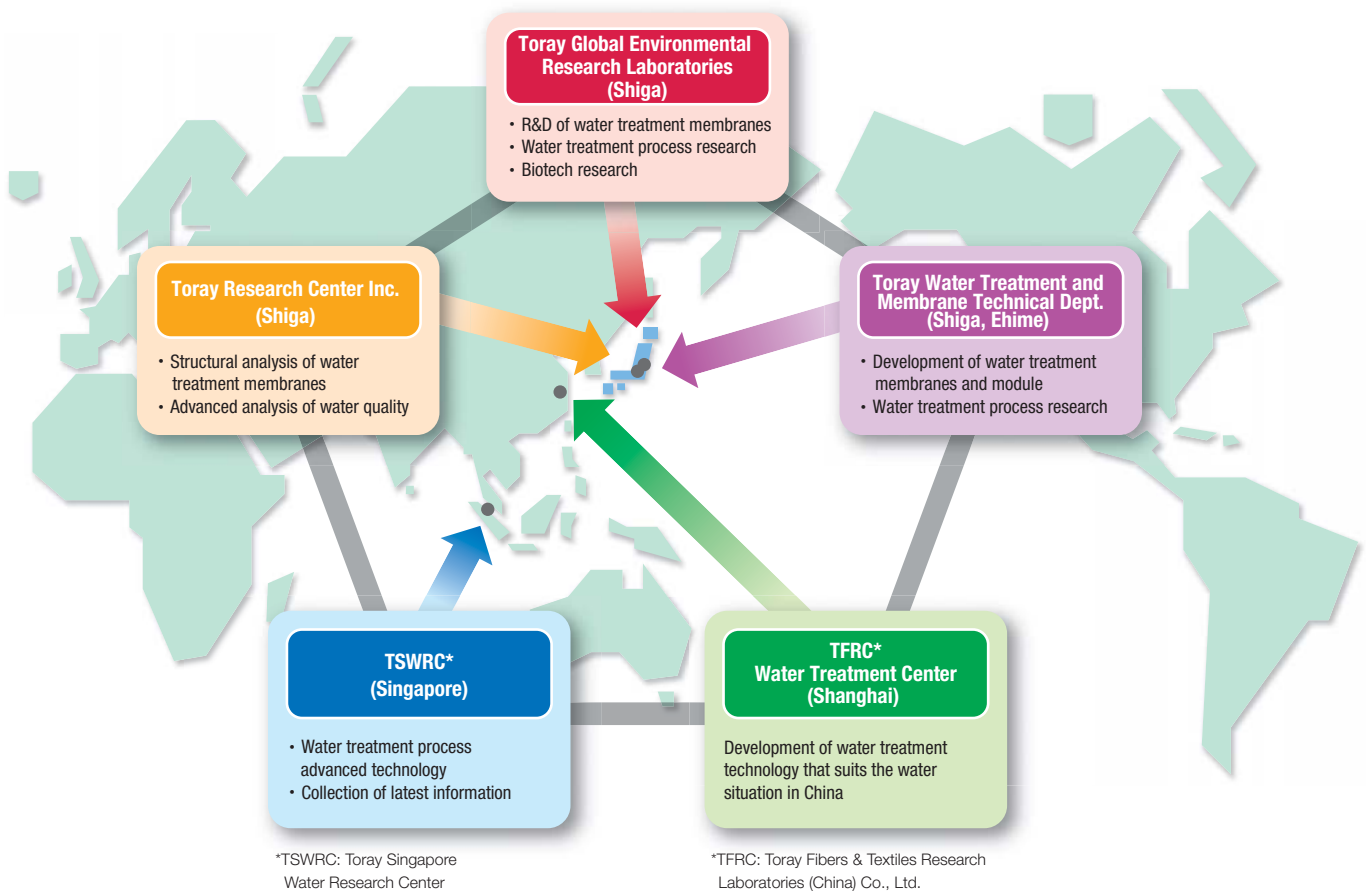
In water treatment, Toray targets scientific and technological solutions to water environment concerns. Responding to today's highly diversified water treatment needs, we are advancing programs to further expand the depth and breadth of our technologies. Such efforts focus on the outstanding polymer membrane technology perfected by Toray Group. We have deployed our own polymer structural control technologies to create innovative selective separation membranes, and offer all four types of membranes including reverse osmosis (RO), nano-filtration (NF), ultrafiltration (UF) and microfiltration (MF) membranes.

In recent years, the market for RO membranes has continued expanding at a rapid annual rate of 10%, mirroring such factors as chronic water shortages worldwide as well as demands for securing water resources in consideration of the environment. In the future as

well, this market is expected to continue growing steadily, primarily in the United States, Europe, the Middle East, North Africa and China. In response to market needs, Toray has developed high-performance RO membranes, including the energy-saving "high boron rejection RO membrane" and a "low-fouling RO membrane." Toray has secured the world's largest-scale orders from such countries as Algeria, Bahrain and Spain.

Toray will proceed with the development of high-efficiency, low-cost water treatment systems that use these high-performance membranes and water treatment systems that utilize biotechnologies. Concurrently, we established Toray Singapore Water Research Center (TSWRC) as an R&D base in Singapore and are now progressing with R&D under a tripolar structure with bases in Japan, China and Singapore.

Toray Group's R&D Structure for Water Treatment Technologies





R&D and Intellectual Property Organization, R&D Collaboration and Partnerships

1 R&D and Intellectual Property Organization

As of 1985, Toray has built a research and technological development organization centering on its Technology Center. The role of the Center is to draft company-wide strategies and key projects for research and technological development.

Each research and technological development department conducts R&D in its own responsible area. At the same time, they collaborate with each other and integrate their technologies across divisional boundaries in order to promote innovative research and deepen and deploy fundamental technologies, probe solutions for urgent issues and take other pertinent actions. To speed up all processes, from development to commercialization, we have upgraded functions to support processing technologies, facilities and equipment technologies and project management for key projects and are combining the overall strengths of the Technology Center as we progress with the development of large-scale businesses.

As an independent organization under the direct control of the President, the Intellectual Property Division is strengthening the intellectual property capabilities of the entire Toray Group based on intellectual property strategies that are linked with management strategies.

(1) A & A Center (Automotive & Aircraft Center)

As a new R&D function, in April 2009 the Advanced Composite Center (ACC) opened at the Nagoya Plant. With the opening of ACC, we have completed the A&A Center (Automotive & Aircraft Center), a comprehensive technology development base for automobiles and aircraft that also combines the Automotive Center (AMC), a technology development base for automobile applications that was opened in June 2008, and the existing Plastics Application Technology Development Center (PATEC).

(2) Globalization of research and development

Toray carries out wide-ranging business activities overseas and therefore operates technology development bases in numerous regions worldwide. In addition to the technology development functions of these bases, Toray will progress with the building of global research bases to strengthen collaboration with leading users and cutting-edge research facilities worldwide and utilize excellent human resources around the world in basic research fields.

In August 2009, we established the Toray Singapore Water Research Center in Singapore to carry out R&D on water treatment technologies that apply Toray's water treatment membranes.

(3) Renovating our basic research structure

In June 2010, Toray renamed its Basic Research Laboratories, which is the basic research department of the Research & Development Division, as the Basic Research Center and newly established the Advanced Materials Research Laboratories within the Center. Concurrently, at the Advanced Materials Research Laboratories, we set up four research units, namely, the New Energy Materials, Bio-based Polymers, Advanced Medical Materials and Basic Polymer units. We also reorganized a portion of the research functions at three domestic bases (Shiga, Nagoya and Mishima) and at two overseas bases (Shanghai, China and Seoul, Korea) into each of the aforementioned units. By organically uniting basic research functions in Japan and overseas through "research units," we will build a structure capable of promoting basic research in materials fields under a company-wide unified strategy.

At the Advanced Materials Research Laboratories, under our global "research unit" structure, we will strive to strengthen our basic research capabilities in "polymer chemistry," which is one of our core technologies, and will promote basic research in next-generation advanced materials that will lead the paradigm shift in society that is typified by responses to global environmental issues as well as promote basic research in polymers for creating epoch-making key materials. Specifically, we will engage in the creation of new energy materials such as innovative battery components as well as non-fossil-resource-derived polymer materials and advanced medical materials and other innovative advanced materials. Also, as detailed in the "Action Program for Growth" Project (APG Project), our growth strategy under the "Project IT-II" medium-term management program, we will also use "products and technologies as solutions to constraining factors of economic growth such as environmental preservation, natural resources and energy, and the aging of the population with declining birthrates."

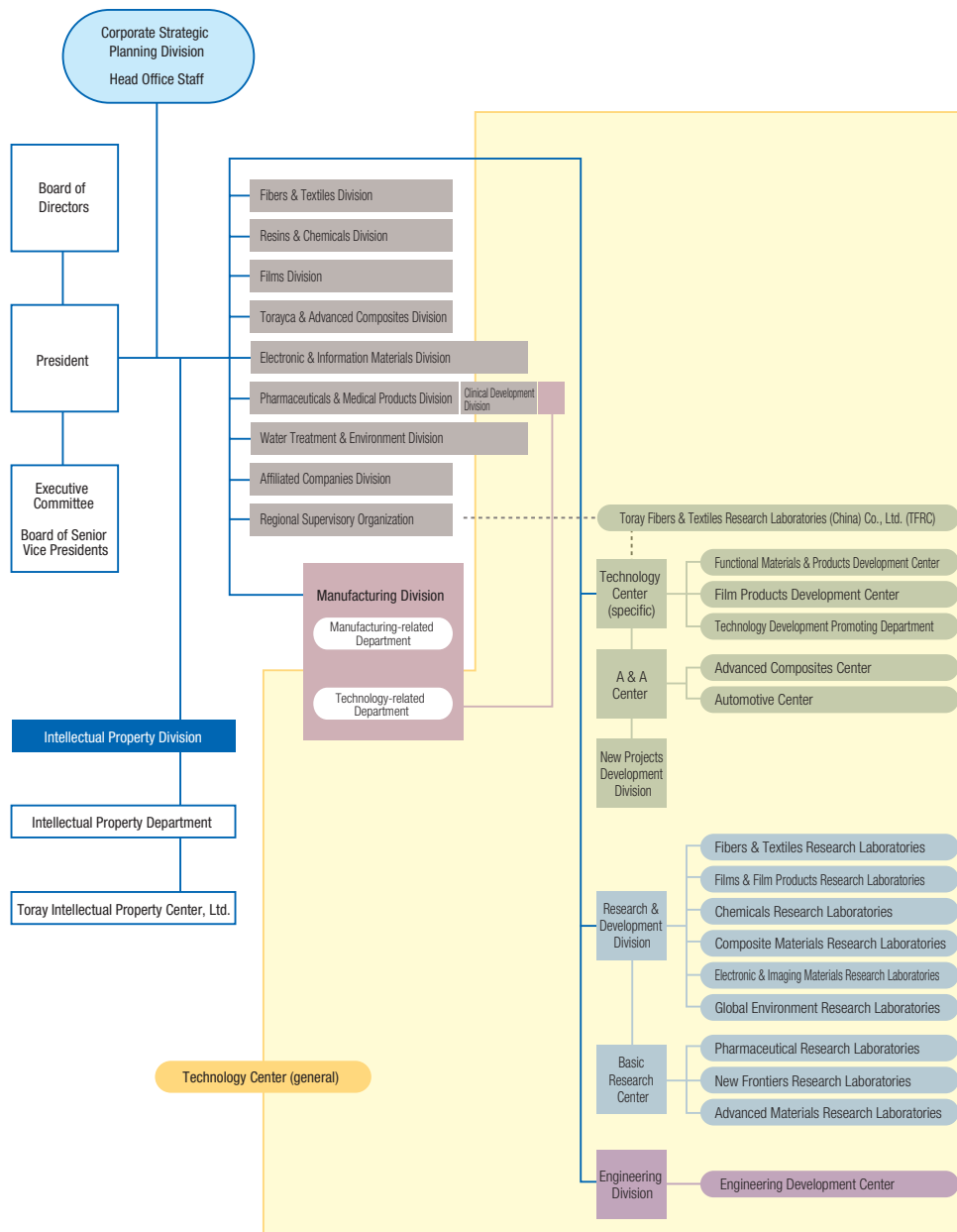
Additionally, we will promote basic research in innovative polymerization processes, polymer advanced structure control and computational chemistry, which will serve as the foundation for creating Toray's advanced materials in the future.

At the Basic Research Center, Toray will promote basic research in materials fields at the Advanced Materials Research Laboratories, basic research in biotechnology, nano-technology and fields where these are integrated at the New Frontiers Research Laboratories and groundbreaking drug discovery research at the Pharmaceutical Research Laboratories. Toray will strive to strengthen the Group's basic research capabilities and will work to create innovative advanced materials.



R&D and Intellectual Property Organization, R&D Collaboration and Partnerships

■ Organization (As of June 2010)



2 R&D Collaboration and Partnerships

Based on the policy that future research and technology development expands opportunities through outside R&D cooperation, Toray Group uses strategic outside partnerships to advance optimum technology mixes. We are promoting a collaborative and integrated approach centered on 1) acquiring advanced technologies from universities and public research institutions; 2) emphasizing strategic collaboration with leading companies; 3) introducing innovative technologies from venture companies; and 4) actively participating in national research projects. True to this conviction, we are promoting dynamic collaboration with outside sources through 150 partnerships and active participation in 30 national projects (as of June 2010).

Toray participated in the establishment of the Limited Liability Partnership Global Water Recycle System Association (GWRA) in January 2009, serving as the association's vice-chair. GWRA was established to formulate an "All-Japan" coalition that gathers Japan's outstanding water-related technologies and know-how to solve problems concerning water on a global scale. GWRA is composed of 38 companies (as of July 21, 2009), including Toray. With government-academia collaboration, GWRA is working to establish a platform for operating a water-circulation system operation business that will be undertaken overseas by March 2014.

VI

Guidelines on Procurement and Management of Intellectual Properties, Management of Trade Secrets, Prevention of Technology Leakage (including implementation of guidelines)

1 Procurement and Management of Intellectual Properties

For procurement and management of patents, Toray adheres to its Patent Management Regulations and Patent Management Standards. These rules are permanently accessible on our intranet. Trademarks are handled in a similar manner with internal rules, including Trademark Management Regulations; Trade Name, Corporate Symbol and Brand Management Regulations; and Trademark Management Standards. These rules are disclosed throughout the Company.

For patents, we have set up a "patent committee" within each business to discuss details and complete all required procedures. Participating in these committees are patent practitioners of Toray Intellectual Property Department and Toray Intellectual Property Center, Ltd., a subsidiary handling Toray Group's intellectual property issues,

as well as members of the research, technology and business (sales) departments in each business sector. In this way, we adopt an integrated approach to the management of intellectual properties, research and technological development and business strategies.

The patent committees provide a particularly useful forum for making key policy decisions to determine the technological areas on which patent applications are focused, inventions for which applications should be filed, existing applications for which requests for examination are to be filed and patent rights that should be maintained or abandoned. Discussions likewise extend to the enforcement of existing patent rights and other key concerns.

2 Management of Trade Secrets and Prevention of Technology Leakage

In 2007, Toray established its own Confidential Information Management Regulations for making adjustments to previously existing information management systems. We took this step due to the need for measures to enable more strict and systematic information management and to prevent information leakage in response to the growing needs for 1) prevention of unfair competition; 2) protection of personal information; 3) security trade administration; and 4) protection of classified information. We took this opportunity to also tighten our management of electronic information, which has become increasingly important to cope with risks in information leaks. These additional mea-

asures supplement our existing Electronic Information Security Standards. We also conduct regular internal audits and other measures to ensure the proper management of classified business information and technical information and prevent information leaks. Regular internal audits also permit effective management and prevent leakage of trade secrets. Along with the recent implementation of the Confidential Information Management Regulations, we have rearranged and strengthened details and are working to thoroughly manage and prevent the leakage of trade secrets and technical information.

VII

Contribution of Licensing-related Activities to Businesses

Toray Group actively promotes the procurement and enforcement of intellectual property rights as a way to distinguish its products and technologies and establish a competitive edge in the marketplace. At the same time, we consider cross-licensing as an important strategy in maintaining continuity and expanding the sphere of our business. To improve overall business profitability, we vigorously promote

licensing operations not only for rights on technologies that are not used within the Group but also for those that we do use internally. Although generating income through licensing is not considered to be an optimal approach for doing business, it bears mentioning that patent fee revenues have constituted a profitable arm of our corporate operations for many years.

VIII

Valid and Enforceable Patents, Patent Applications, External Commendations

1 Valid and Enforceable Japanese Patents (Total for Toray Industries, Inc. and 32 Japanese and overseas affiliates at the end of March 2010)

Toray Group takes an aggressive approach to obtaining patents with high potential for use in developing advanced materials, and will firmly maintain this stance in the future.

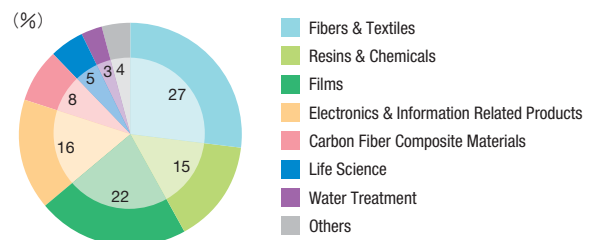
In recent years, we have engineered a pronounced shift in emphasis from quantity to quality, which translates into greater emphasis on improving the quality of patents. This has resulted in a more stringent focus on cost awareness and operational efficiency in determining of whether or not to file patent applications or to file a request for examination for our patent applications as well as when rendering

judgments on whether to maintain or abandon existing patent rights.

At the end of March 2010, the number of valid and enforceable patents in Japan is 3,388, of which 1,559 (46%) have been currently used within the Group; 1,341 (40%) are scheduled to be used in the future; and 488 (14%) are patents for defense and other purposes. The following chart breaks down these patents by specific R&D segment.

Number of Valid and Enforceable Japanese Patents at the End of March 2010

Fibers & Textiles	914
Resins & Chemicals	509
Films	745
Electronics & Information Related Products	558
Carbon Fiber Composite Materials	263
Life Science	173
Water Treatment	104
Others	122
Total	3,388



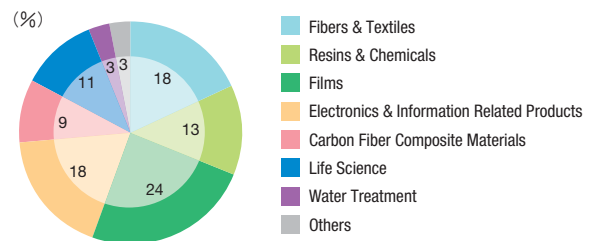
2 Valid and Enforceable Foreign Patents (Total for Toray Industries, Inc. and 32 Japanese and overseas affiliates at the end of March 2010)

At the end of March 2010, the number of our valid and enforceable patents in countries other than Japan was 3,657, with the following chart breaking down these patents by specific R&D segment. The large proportion of foreign patents for Electronics & Information Related Products, Carbon Fiber Composite Materials and

Life Science compared with that of Japanese patents owned in those areas reflects Toray's goal of expanding its operations globally in these businesses.

Number of Valid and Enforceable Foreign Patents at the End of March 2010

Fibers & Textiles	653
Resins & Chemicals	480
Films	885
Electronics & Information Related Products	669
Carbon Fiber Composite Materials	322
Life Science	414
Water Treatment	118
Others	116
Total	3,657



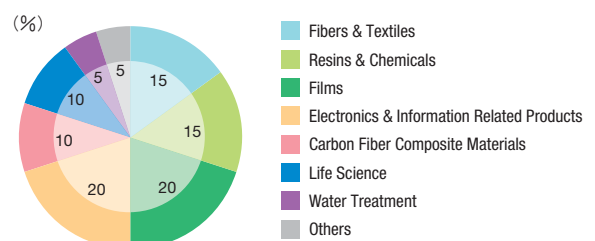
3 Japanese Patent Applications (Total for Toray Industries, Inc. and 32 Japanese and overseas affiliates in FY 2009)

During FY 2009, the number of applications was 1,112, with the following chart breaking down these applications by R&D segment. The relatively large proportion of patent applications in Electronics & Information Related Products, Carbon Fiber Composite Materials, Life Science and Water Treatment compared with

that of the domestic patents owned in those areas reflects Toray Group's policy of actively applying for new patents in its Strategically Expanding Businesses and Strategically Developing Businesses.

Number of Japanese Patent Applications in FY 2009

Fibers & Textiles	169
Resins & Chemicals	163
Films	224
Electronics & Information Related Products	221
Carbon Fiber Composite Materials	109
Life Science	116
Water Treatment	60
Others	50
Total	1,112



VIII

Valid and Enforceable Patents, Patent Applications, External Commendations

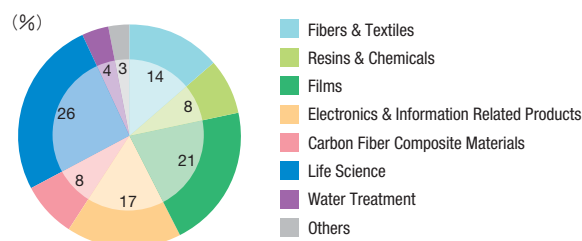
4 Overseas Patent Applications (Total for Toray Industries, Inc. and 32 Japanese and overseas affiliates in FY 2009)

During FY 2009, the number applications for overseas patents was 1,627, with the following chart breaking down these applications by R&D segment. Particularly noteworthy, the relatively large proportion of patent applications in Films and Life

Science compared with domestic patent applications are an indication that we aim to expand our global business in these fields

Number of Overseas Patent Applications in FY 2009

Fibers & Textiles	220
Resins & Chemicals	136
Films	337
Electronics & Information Related Products	269
Carbon Fiber Composite Materials	127
Life Science	423
Water Treatment	69
Others	46
Total	1,627



5 External Commendations

Commendations Received in FY 2009

National Commendation for Invention

Commendation	Matter for Commendation	R&D Segment
The Prime Minister Prize of the National Commendation for Invention	Method for thermal welding of fiber reinforced thermosetting plastics and integrated molded object	Carbon Fiber Composite Materials

In FY 2010, Toray received the Japan Chamber of Commerce and Industry President's Invention Award in the category of National Invention Commendations. This marks the second consecutive year we have earned an award in this category following earning of the Prime Minister's Invention Award in FY 2009.

Local Commendations for Invention

Commendations	Region	Matters for Commendations	R&D Segment
The Encouragement Prize for Invention of the Minister of Education, Culture, Sports, Science and Technology	Kinki	High-performance polysulfone membrane and method for its production	Life Science
The Encouragement Prize for Invention	Kinki	Non-formalin antibacterial material	Fibers & Textiles
The Encouragement Prize for Invention	Kinki	Pollen-resistant wear	Fibers & Textiles
The Encouragement Prize for Invention	Shikoku	Woven fabrics for fiber reinforced resin	Carbon Fiber Composite Materials
The Encouragement Prize for Invention	Shikoku	Sound-proofing walls for railway lines, being super lightweight, elimination resistant and excellent design	Carbon Fiber Composite Materials

Other External Commendations

Commendations	Awarding Institution	Matters for Commendation	R&D Segment
The Chemical Society of Japan Award for Technical Development for 2009	The Chemical Society of Japan	Development and commercialization of positive photosensitive polyimide coatings by using partial esterification	Electronics & Information Related Products
The Society of Synthetic Organic Chemistry, Japan, Award (Technology)	The Society of Synthetic Organic Chemistry, Japan	Discovery of the first in class drug for intractable itch, nalfurafine hydrochloride	Life Science
Best Technology Innovation Award	Japan Society for Composite Materials	R&D of carbon fiber-reinforced composite materials to reduce automobile weight	Carbon Fiber Composite Materials
The PSJ Award for Drug Research and Development	The Pharmaceutical Society of Japan	Discovery of the first in class drug for intractable itch, nalfurafine hydrochloride	Life Science
Original Award in the 47th Annual Meeting of the Japanese Society for Artificial Organs	Japan Society for Artificial Organs	Development of new polymethyl methacrylate dialysis membrane	Life Science
JSMS Award (H21) for Technical Development	The Society of Materials Science, Japan	Development of low cost and high-performance CFRP with controlled nano/micro morphology	Carbon Fiber Composite Materials
2009 Nikkei Global Environment Technology Award	Nikkei Inc.	Technology development of short-cycle time process for integrated CFRP (Carbon Fiber Reinforced Plastic) parts	Carbon Fiber Composite Materials
2009 JSNP Best Paper Award	Japanese Society of Neuropsychopharmacology	Effect of TRK-820, a selective kappa opioid receptor agonist, on scratching behavior in an animal model of atopic dermatitis	Life Science
High Technology Grand Prize of the Ministry of Economy, Trade and Industry	Fuji Sankei Business-i	Short-cycle time process for integrated CFRP (Carbon Fiber Reinforced Plastic) parts	Carbon Fiber Composite Materials
The Third Monodzukuri Nippon Grand Prize Special Prize	Ministry of Economy, Trade and Industry	Development of high-performance reverse osmosis membranes for desalination	Water Treatment
JISSE-11 Best Paper Award	Japan International SAMPE Symposium & Exhibition	Thermoplastic press sheet with in-plane random and dispersed carbon fibers	Carbon Fiber Composite Materials
Nanotech Award, Green Nanotechnology Award	Nanotech Executive Committee	Toray Industries has been instrumental in establishing truly innovative technologies that contribute to the field of green nanotechnology. These achievements include development of high-performance reverse osmosis membranes for desalination and effluent processing, weight reduction and improvement of fuel efficiency through the development of carbon fiber composite materials, and energy conservation through the development of unique heat insulation sheets (wall materials)	Water Treatment / Carbon Fiber Composite Materials
The Topic Prize of Annual Meeting of JSBBA 2010	Japan Society for Bioscience, Biotechnology, and Agrochemistry	D-lactate fermentation by the yeast expressing novel and highly active D-lactate dehydrogenase	Life Science

IX

Policies for Intellectual Property Portfolio

As noted in Part III of this report, Toray Group manages its intellectual property portfolio with a close eye on the future profitability and technical innovation of each technology and product. We have established "Rank-A Projects" for technologies assigned particularly high importance, with invention activities promoted on a prioritized

basis. These projects promote activities of the formation of patent portfolios through the creation of patent maps to thoroughly comprehend technologies and patents of other companies, and establishment of subsequent strategies for enforcement of the patent rights.

X

Information on Risk Response

As part of its defense-oriented intellectual property activities, Toray regularly research and examines the patents of its competitors in each technology. Our policy likewise requires mandatory confirmation of competitors' patents before any new product is commercialized and judgments of whether we could infringe on any of the patents. If any patents having an impact on our business are identified, the next step

is to plan and execute countermeasures to remove such impacts. At the present time, there are no intellectual property related lawsuits in the courts judged capable of exerting a serious impact on the business interests of Toray Group.

Note

The plans, prospects and strategies referred to in this report are merely assumptions based on available information at the time of issuance of this report. They are subject to revision in the event of changes to Toray Group's operating conditions, the emergence of new technical innovations and changes to the intellectual property environment.

Product names with an asterisk (*) are trademarks of Toray Industries, Inc.

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