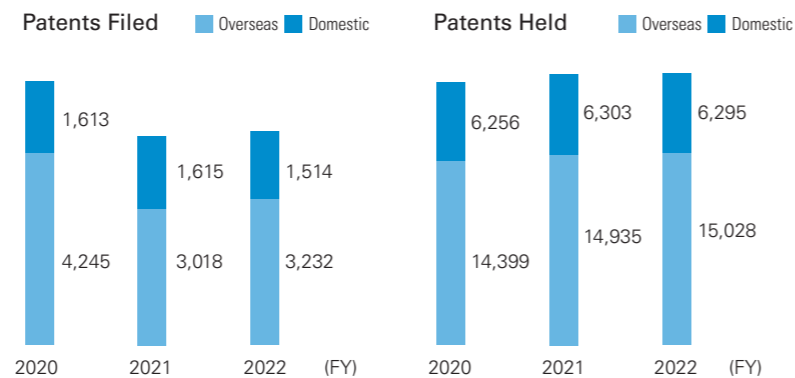


Intellectual Property



Basic Policies on Intellectual Property

Toray Group 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 Group regards intellectual property as one of its vital management resources. We have linked our intellectual property strategies mutually and organically with our business and R&D strategies, and as a component of this “trinity,” we have positioned intellectual property strategies as one of the most important elements of our management strategies.

2. Promoting the procurement of rights

In order to protect Toray Group’s products and technologies and to ensure profits, we promote high-quality patent applications and patenting, and strive to build a strong patent network with deterrence capabilities. Regarding trademarks, we execute the acquisition of appropriate rights with an eye to improving brand value. The decline in the

number of patent applications filed during FY 2021 was due to the careful selection of filing countries in consideration of cost-effectiveness.

3. Respecting the rights of others

Toray operates a patent confirmation system to comprehensively investigate the relationship between its own products and technologies and patents owned by other companies to assure that there is no infringement upon the rights of other parties. We also check the relationship of our trademarks with those registered by other companies prior to use.

4. Rightful enforcement of our own rights

When Toray Group’s patent rights are infringed upon by another party, we take proper steps depending on the circumstances by exercising our patent rights, such as demanding that infringement cease, receiving monetary profits from licensing, and using our patent rights for cross-licensing with the patent rights of other parties.

Systems and initiatives for intellectual property strategy implementation

Toray Group implements intellectual property strategies in line with its basic policies through the following systems, initiatives, etc.

1. Patent responsibility structure and global patent strategy responsibility structure

Toray and its major group companies appoints patent managers for each product line and technology group and have established patent committees with the participation of members from the Intellectual Property Division, as well as research, R&D, and marketing and sales departments. Activities with regard to filing, patenting, defense, and exploitation of rights are promoted upon deliberation by the patent committees. In addition, the supervising executives in charge of technology and production in each business are appointed as global patent strategy chairperson to guide and supervise global intellectual property activities conducted by Toray and its Japanese and overseas group companies in each business.

2. Development and implementation of an Intellectual Property (IP) action plan

Under the guidance of global patent strategy chairperson, each business division formulates and carries out an “IP

action plan” concerning important matters on intellectual property. Themes that should be given particular emphasis are selected as “Rank-A Projects” and focused upon for promotion. The status of implementation of the IP action plan is reported once a year to the Board of Directors.

3. Building barriers to other companies’ entry by intellectual property

Toray and its major domestic and overseas subsidiaries and affiliated companies are strategically using patent application and patenting as well as concealment of know-how to build strong barriers to entry by other companies.

4. Patent confirmation system

When manufacturing or selling new products, we ensure that utilization, production, sale, etc. of our technologies and products do not infringe upon the patent or other rights of others.

5. IP landscape initiatives

In formulating IP strategies, we are taking action to explore ways to utilize our patents, and other initiatives, such as promoting the training of personnel (IP analysts, and others) who can exploit IP landscapes, developing research tools, and also analyzing the business environment and investigating new and relevant topics.

Assessing Toray’s intellectual property

1. Toray Takes Top Spot on Patent Result’s Ranking for Fiber, Paper and Pulp Industry

The “2022 Ranking of Capability to Prevent Other Companies from Obtaining Patent Rights,” published annually by Patent Result Co., Ltd., is an advanced patent application index that compiles the number of patents by a company that were cited as reasons for rejection of another company’s patent application in the course of the patent deliberation process, in any particular year. Toray was ranked No. 1 in the fiber, paper and pulp category for the eleventh consecutive year. As the same index benchmarks are used, if “fiber, paper and pulp,” and “chemicals” categories are treated as a single industry, Toray’s ranking becomes No. 4.

2. Ranked 16th on the “2022 Patent Asset Growth Ranking”

Toray ranked 16th on the “Patent Asset Growth Ranking,” a list created by Nikkei Business Magazine consisting of the top 40 Japanese companies ranked in accordance with the degree of growth in patents held by these companies over the past two years as of the end of December 12, 2022. This ranking adopts a calculation method that combines the number of held patents with the frequency of citations made in patents filed by other companies, for example, and therefore tends to reflect trends in innovation.

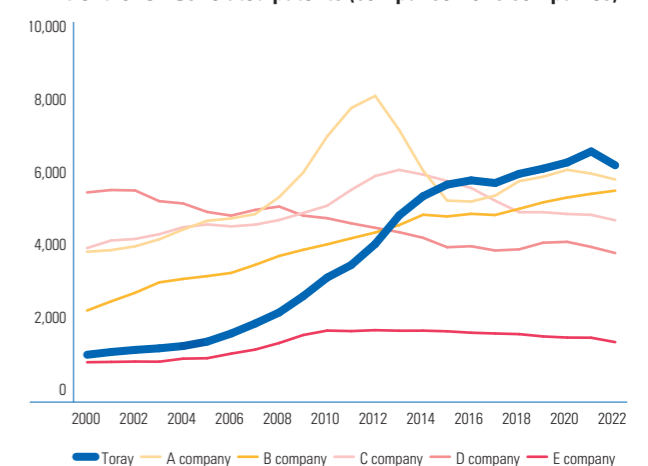
3. Patent Asset Index™ Assessments

LexisNexis’s PatentSight™ provides a Patent Asset Index™ (PAI) based on the technical and market value of patent families.

The following figure illustrates the changes in the PAI for six competing companies, including Toray Group, regarding patent families pertaining to the SDGs (Sustainable Development Goals). The SDGs are a set of international objectives consisting of 17 goals and 169 targets that aim to achieve a sustainable, better planet by 2030.

Toray Group has steadily increased the value of related patents that can contribute to the achievement of SDGs over the past 20 years, including years prior 2015 when the SDGs were first raised by the UN Summit. Since 2016, the Group has been in a superior position compared to its competitors.

PAI trend of SDGs-related patents (comparison of 6 companies)



*Prepared by the Company using the PatentSight Patent Asset Index™ of LexisNexis, Inc.

Toray intellectual property contributes solutions to global environmental issues

Separation Membrane Technology

Since the 1980s, Toray has continued to create innovative separation membrane technologies for artificial kidney, reverse osmosis (RO) membrane, and other similar applications, where the evolution and development in these technologies has shown further expansion. The figure to the right maps the standing of patents related to separation membrane technologies held by Toray Group, and uses different colors corresponding to each technological field to indicate Toray’s many patents.

In the field of membrane bioprocesses, specifically, Toray advances research into bioprocesses that fuse membrane technologies and biotechnologies in order to produce inedible sugars and chemicals from inedible biomass at high-efficiency while consuming less energy. At the same time, Toray has been conducting demonstrations and commercialization investigations in Thailand regarding these technologies. Toray has acquired multiple related patents (red dots) in conjunction with this development, through which it will help to realize a society that does not rely on fossil resources.

Landscape map of patents related to separation membrane technology (each dot: Toray Group patents)

