R&D and Intellectual Property Strategy

Related Materiality

- Responding to climate change
- Ensuring the safety of products and chemical substances
- Improving value and reliability of products

Message from executive officer in charge of R&D

We plan to develop new products in five fields targeted in our business strategy roadmap. Our SPEED 25/30 Mid-term Management Plan sets the five domains of cutting-edge electronic device materials, environmentally friendly dyes, polyols, bio-medical materials, and environmentally aware agricultural materials as concrete business fields in which we will employ flexible ideas to conduct R&D on technologies matched to market needs. We will also accelerate initiatives in new fields derived from those technologies, and will connect these to the enhancement of the corporate value.

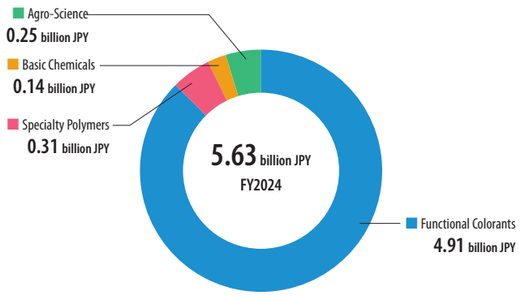
Norimasa Yokoyama Managing Executive Officer

R&D Strategy

The Hodogaya Chemical Group has formulated the 10-year scenario "ideal figure" for the Company in FY2030 and "target figure" in FY2025, the midpoint for that. To achieve that, we will quickly identify social needs that are growing extremely diverse and promote research and development that can immediately meet the different needs of various customers. In particular, we give form to the skills and know-how from the technology we have cultivated over our long history to develop products and production technology with all-new functions. We also engage in research and development to become a corporation that contributes to establish a sustainable society by means of our original portfolio and environmentally friendly manufacturing, with a focus on specialty products.

Also, we will encourage innovation by creating specialty products to help achieve SDG goal 9 (Industry, Innovation and Infrastructure).

R&D investment amount (by segment)



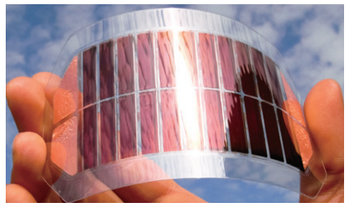
Basic Strategies in SPEED 25/30		
	Further development of strategic products while fostering new ideas	• New business creation and growth for functional colorants • Take new research projects into—and beyond—the development stage
	Strengthen our R&D structure	• Expand our sustainable creation of new research projects • Establish an organizational structure able to swiftly move from research to mass production

● Further development of strategic products while fostering new ideas

Drawing on over a century of technological development, the Hodogaya Chemical Group seeks to expand and advance strategic products through R&D led by our Tsukuba Research Laboratory, three plants in Japan, and South Korea-based Group companies HCK and SFC.

By reinforcing and applying our proprietary technologies and knowledge gained primarily in the area of OLED materials, we aim to enter applied fields such as perovskite solar cells and expand our presence in the biotechnology and semiconductor fields. In the application of functional colorants, we are also undertaking R&D in near-infrared (NIR) absorbent dyes that show promise for sensor applications.

To create new businesses for the next generation, in the fields of Electronics & Information, Mobility, Environment & Energy, Life Sciences, and Agricultural & Food we will conduct research and investigations to establish R&D strategies based on a long-term perspective, primarily through the New Product Exploration Project.



Perovskite solar cells

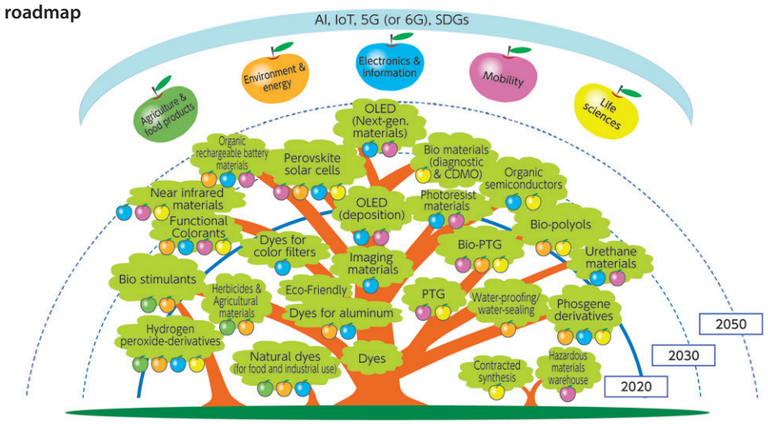
● Initiatives related to perovskite solar cells

The size of the global market for perovskite solar cells is predicted to reach 2.4 trillion JPY by 2040. Japan's Seventh Strategic Energy Plan aims for the introduction of about 20 GW of electrical power by 2040 through three-way efforts by public- and private-sector stakeholders as a national-level policy.

However, the development of higher-performance materials is essential to the proliferation of perovskite solar cells. The Hodogaya Chemical Group has developed a number of materials that are expected to enhance the performance of these solar cells. Industry-academia cooperation is an important part of our R&D efforts, and we have co-authored several papers involving joint research with Professor Tsutomu Miyasaka, a recognized authority in perovskite solar cell research.

We will accelerate our R&D aimed at the proliferation of this technology as we continue working toward a sustainable society.

Business strategy roadmap



Intellectual Property Strategy

● Promoting an intellectual property strategy

Keeping in mind our future business portfolio, we are moving forward with quickly filing patents and securing intellectual property rights related to the results of our research and development.

We are also working to enhance the quality of our patents through the use of intellectual property education and patent maps based on information searches and patent analysis. In 2023 and 2025, our Company was included in Nikkei Business Publications' Intellectual Property Management Ranking of companies with high patent value growth. In particular, for IP education, we hold courses for all frontline researchers using the Company's own experiences as case studies based on the principle that it is important to conduct research and development with an eye toward securing rights. We continue to aim to secure firm intellectual property rights both in Japan and overseas in order to respond to our global business expansion.

VOICE

R&D and development sales at overseas bases

Y. H.
HODOGAYA CHEMICAL KOREA CO., LTD.

At HODOGAYA CHEMICAL KOREA (HCK), I am responsible for development and development sales of OLED materials, primarily for South Korean customers. South Korean culture places importance on efficiency and speed. Located close to overseas customers, the base engages in work with a sense of urgency.

Setting quality standards and performing stable quality control are also key tasks of mine at HCK. We create quality control specification standards on the basis of evaluated data and conduct quality evaluations stably and efficiently with delivery deadlines in mind. Seeing products head out into the world creates a truly rewarding feeling.

By continuing to develop new OLED materials and provide added value, we seek to ensure that our materials are consistently selected for use in customers' new products.

Relevant Group company: **Hodogaya Contract Laboratory Co., Ltd.**
Description of business: Contract based custom synthesis, analysis and development

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Webpage: http://www.h-contractlabo.co.jp/index-e.html