

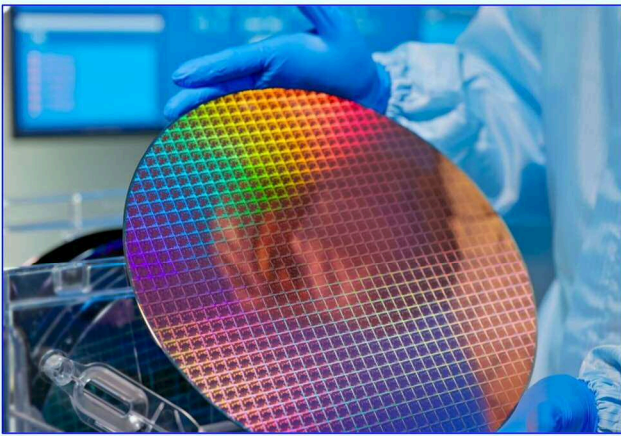
# Toagosei aims for further growth of chemical agents for semiconductor manufacturing and automotive battery materials

## Strengthening new product/technology development capabilities

Nikkei CNBC's "Interview with Top Management" released on April 19, 2024 provided by Toagosei Co., Ltd.

### Growth Drivers

#### Growth Drivers



**Chemical agents for semiconductor manufacturing**



(Source: Toyota Motor Corporation)

**Automotive battery materials**

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Masaki Morita: From here we bring you "Interview with Top Management." Today we have with us Mr. Mikishi Takamura, the president of Toagosei Co., Ltd. Mr. Takamura, thank you for joining us today.

Mikishi Takamura: Thank you for having me.

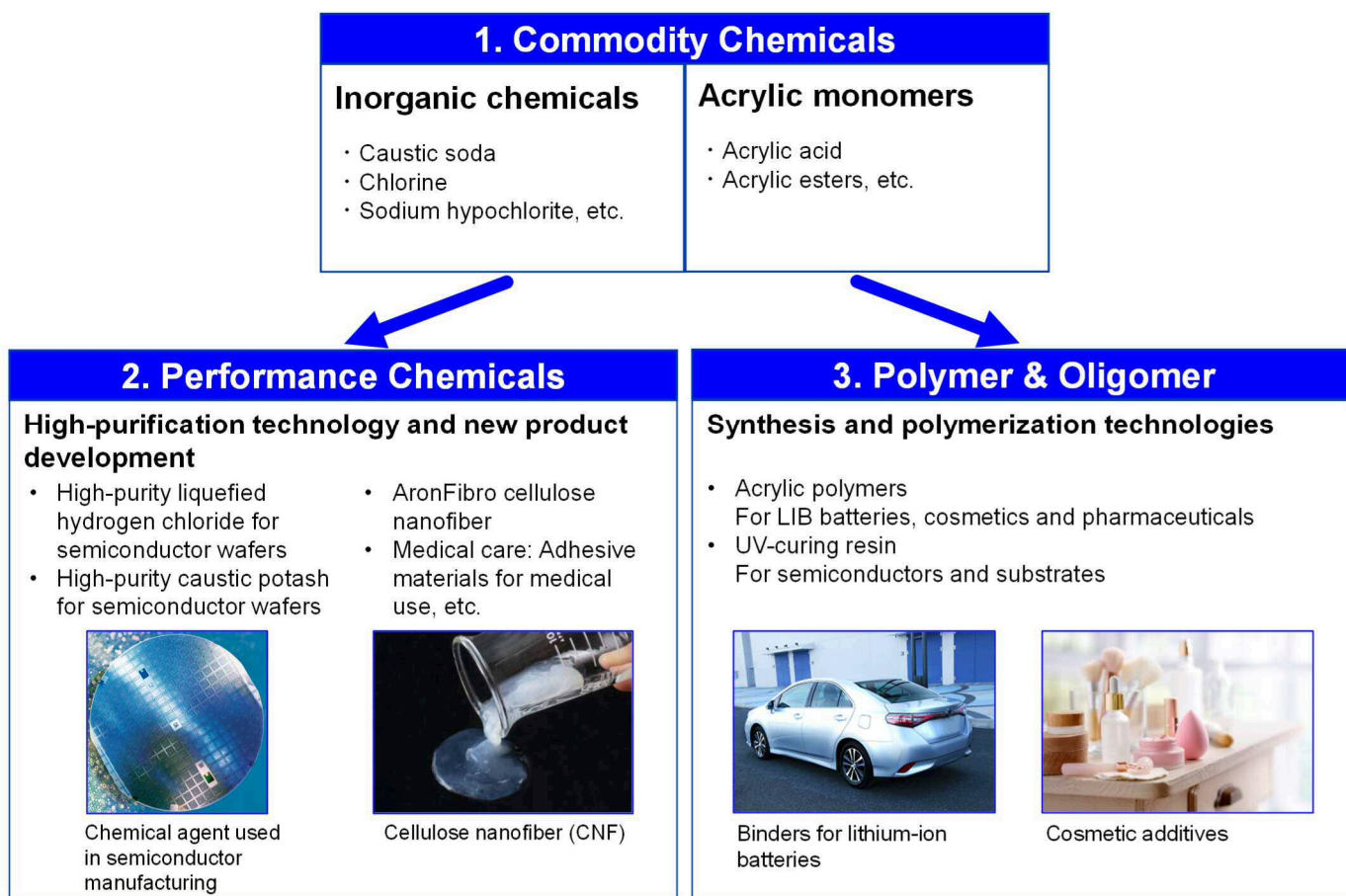
Morita: Toagosei was founded in 1944, which means you have been in business for 80 years. I believe that the company has been growing by adding new growth areas along the way. Currently, what areas do you see as growth drivers?

Takamura: We have two main fields. One is chemical agents for semiconductor manufacturing. The other is automotive battery materials.

Morita: Alright, I would like to hear more later on about how you will nurture these two growth drivers from now.

# Our Five Business Segments (From Upstream to Downstream)

## Our Five Business Segments (From Upstream to Downstream)



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Morita: Two pages of slides, this and the next, summarize the five business segments of your company.

The first is the Commodity Chemicals segment, which handles inorganic chemicals and acrylic monomers. The second is the Performance Chemicals segment; the third is the Polymer & Oligomer segment; the fourth is the Adhesive Materials segment; and the fifth is the Plastics segment.

You have these five business segments. Could you tell us how you operate them?

Takamura: The businesses are deeply related to each other. Specifically, over the course of more than 100 years since the first production of inorganic chemicals, caustic soda and hydrochloric acid led to today's materials for semiconductors and other products.

Also, with acrylics, we have been working on acrylic acid and acrylic esters as part of our petrochemical business. This was expanded "downstream" to the high-performance polymers, which were further developed into products with a wide variety of functions such as automotive battery materials and cosmetic additives.

Morita: What makes your business operations different from others is its broad expansion from upstream to downstream, that is, from the top to the bottom of the value chain. In such an environment, you have a track record of continuously developing and launching new high-performance products.

I see that even now, because of such an environment, you have the strength in developing various businesses, using upstream materials to create high-performance products.

Takamura: You are exactly right.

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# Our Five Business Segments

## Our Five Business Segments

### 4. Adhesive Materials

#### Compounding and material technologies

Adhesives for bipolar nickel-hydrogen batteries



(Source: Toyota Motor Corporation)

Adhesives for fuel cells



(Source: Toyota Motor Corporation)

#### Marketing and brand strength

Aron Alpha (Japan)



Krazy Glue & Tape (USA)



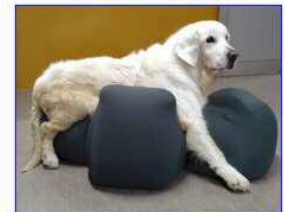
### 5. Plastics

#### Molding and processing technologies

Anjyu (nursing care products)



Pet support products



Precision molding of elastomers



High-performance chambers for flooding and inundation countermeasures



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Morita: When categorizing businesses into B2B and B2C, you are engaged in B2C as well.

Takamura: Yes, we are. In the Adhesive Materials Business, we are working on both B2B and B2C. B2B includes automotive applications.

B2C has Aron Alpha. Every few years, we launch a completely new product, and last year we released Aron Alpha Hikari, which is cured by light.

This product can glue things together in various areas such as model construction based on a completely different principle than before. It is also extremely strong and free from blushing\*. For these reasons, it is highly appreciated.

Morita: Aron Alpha has already been on the market for more than 50 years and has an 80 percent market share. It has been recognized by Guinness World Records as the longest-selling consumer super glue brand. We take these products for granted, but the technology used in them is continuously advancing.

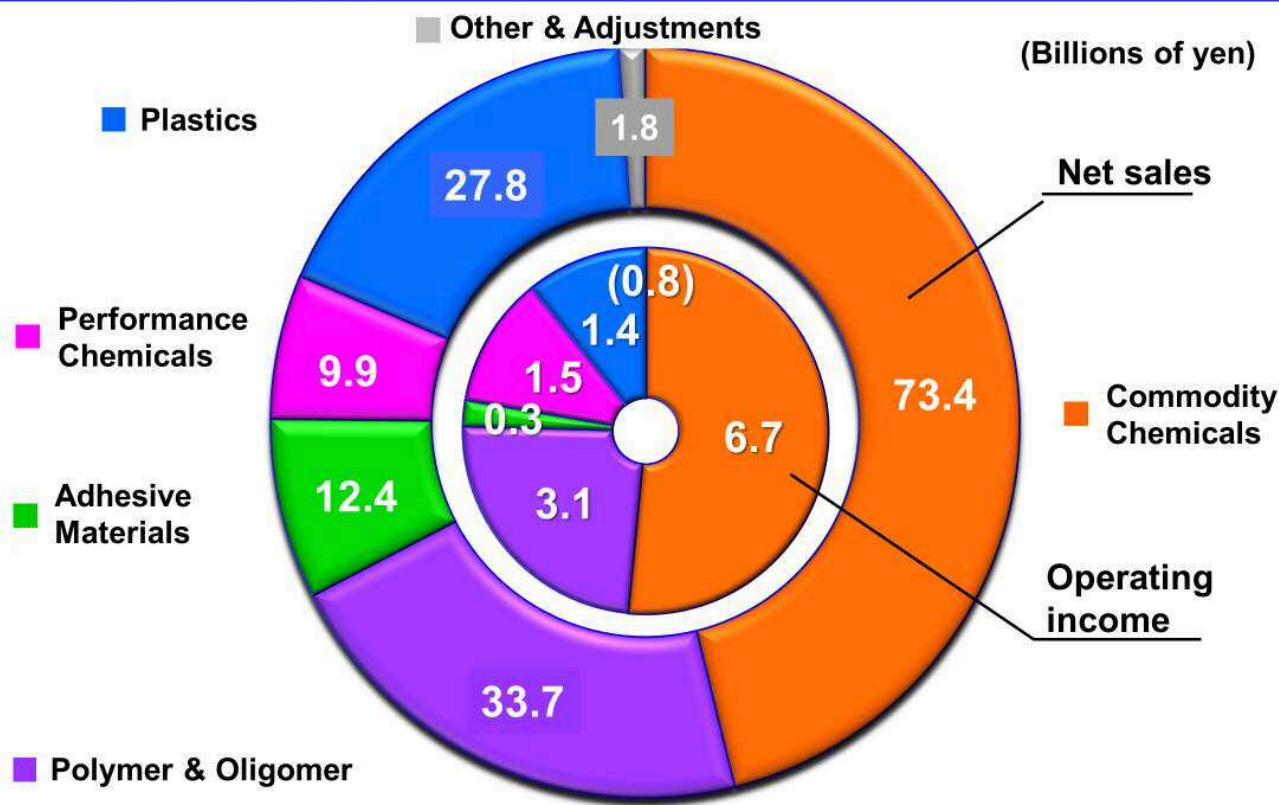
Takamura: That is true. Not only do we change the container and package, we also even change undiluted solution in them, and release new products under the same brand name of Aron Alpha. I believe it is one of our unique strengths to be able to do this.

\*The phenomenon in which the area around where the adhesive has been applied becomes whiter.



# Earnings Structure of the Toagosei Group (2023 Results by Business Segment)

## Earnings Structure of the Toagosei Group (2023 Results by Business Segment)



**Group-wide Net Sales: 159.3      Operating Income: 12.4**

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Morita: So you operate with these five business segments. Now I would like to review the earnings structure.

Takamura: The slide shows last year's results. The outer part of the pie chart shows net sales and the inner part shows operating income by segment. As for cash, we earn from basic commodity chemicals products. Thanks to this business segment, we are able to take necessary measures in areas such as polymer & oligomer, adhesive materials and other functional products.

Last year, sales and profits declined year on year due to sluggish volume growth. However, we were able to maintain a reasonable profit level by passing on price increases to our customers.

Morita: Our earnings structure is characterized by the fact that the Commodity Chemicals segment works as a cash cow, which helps grow high-performance materials and other products.

In the last fiscal year, you had a decrease in sales and profits, with operating income down by about 10 percent year on year. For this fiscal year, you are expecting a 12 percent year-on-year increase in operating income. Is this correct?

Takamura: Yes, it is. We plan to increase operating income of all the segments. In particular, we have high expectations for the Performance Chemicals segment, which includes materials for semiconductors, as well as for the Adhesive Materials segment. We project an increase in operating income particularly in these areas.

Morita: I understand. Now, let me ask you about the two growth drivers you mentioned earlier. First, please tell us about your semiconductor-related business.

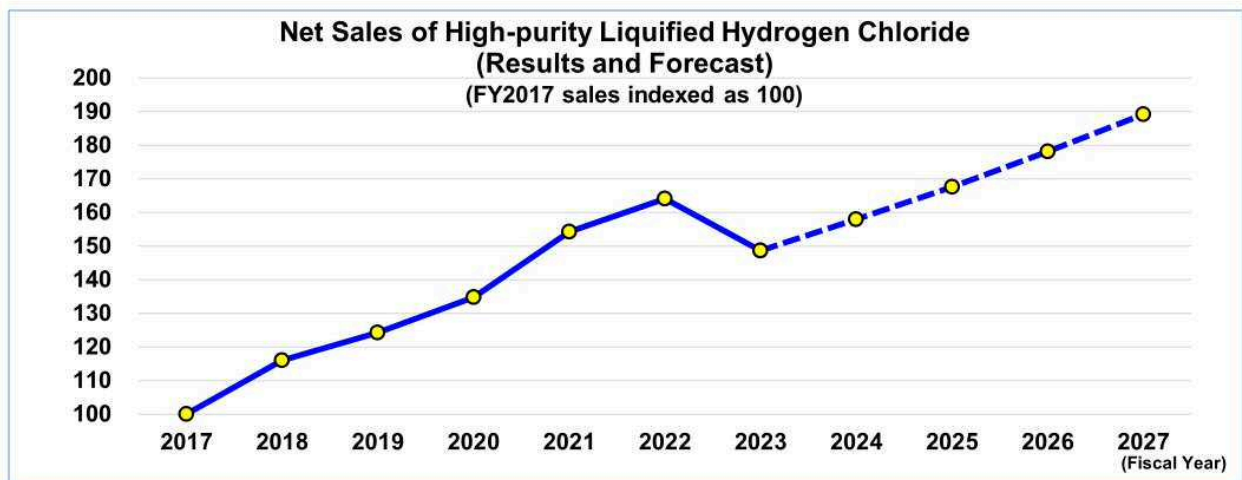
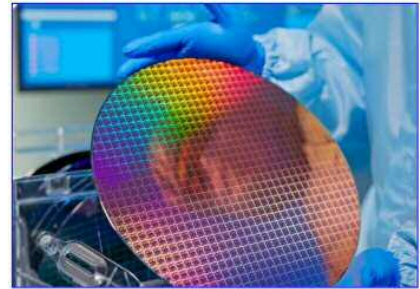
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# Growth Drivers (Semiconductor-related)

## Growth Drivers (Semiconductor-related)

- High-purity liquefied hydrogen chloride
- High-purity caustic potash
- Acrylic polymers for high performance CMP\*  
\*Chemical Mechanical Polishing

Applications: Cleaning and polishing during semiconductor manufacturing, among others.



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Takamura: We supply three materials used for cleaning and polishing wafer materials, among others. Net sales have been steadily increasing. Last year, net sales unfortunately fell a little, but this year we are already seeing a positive sign of recovery.

We believe that further development can be expected in each of these areas. And this is especially true for the top two on the slide, as they have a large share of the market.

Morita: I see. Next, please tell us about the other growth driver, the automotive battery-related business.

# Growth Drivers (Automotive Battery-related)

## Growth Drivers (Automotive Battery-related)

### ■ Adhesives for automotive batteries (hybrid and fuel cell vehicles)

Being rolled out in phases for new hybrid and fuel cell vehicles equipped with bipolar nickel-hydrogen batteries.

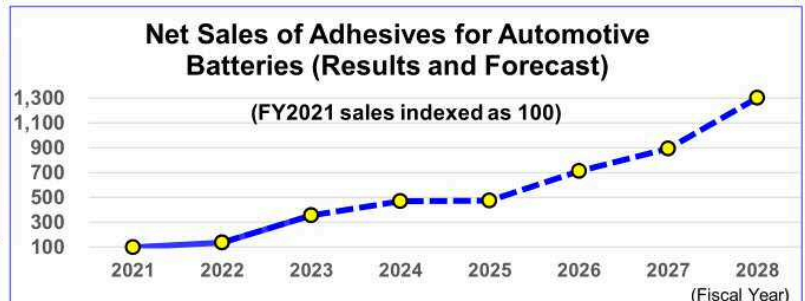
#### Equipped Models

MIRAI  
AQUA  
CROWN  
LEXUS RX  
ALPHARD  
VELLFIRE  
and others



(Source: Toyota Motor Corporation)

CROWN (Sport)



### ■ Binders for lithium-ion batteries

- Prolonging battery life by suppressing anode expansion.
- Considering investment in production facilities overseas (to ensure a stable supply and acquire new customers).



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Takamura: Our two product lines are adhesives for automotive batteries and binders for lithium-ion batteries. As I mentioned last year, the number of car models equipped with our adhesives is definitely increasing. Sales are growing as shown in the graph.

Binders for lithium-ion batteries are also growing steadily. Looking ahead to the need for production not only in Japan but also overseas, we are now considering where and how to manufacture these products.

Morita: I see. In your management plan through 2025, you say that the emphasis is now on research and development. Could you elaborate on this?

# R&D and Capital Investment for Growth

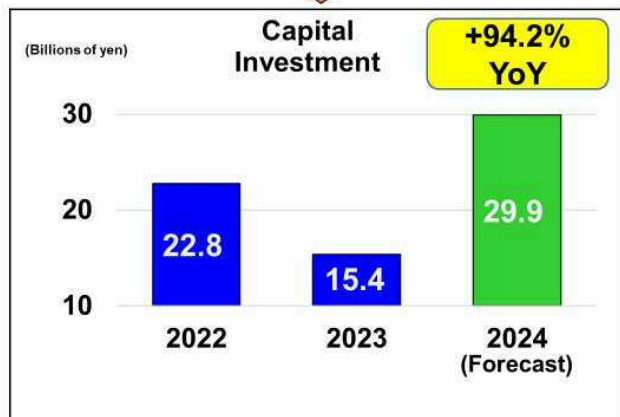
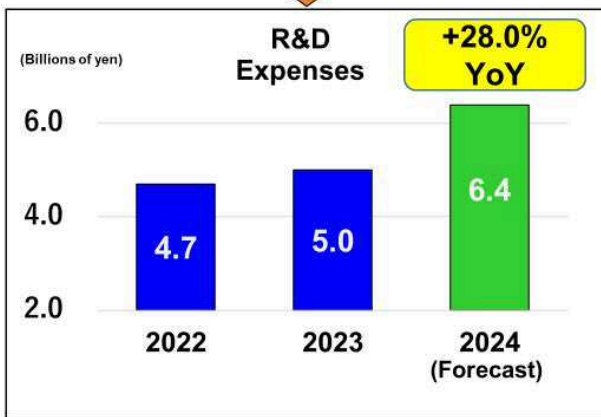
## R&D and Capital Investment for Growth

### R&D

- R&D investment in growth fields
  - Next-generation batteries
  - Semiconductor-related materials
  - Medical care
  - Cellulose nanofiber (CNF) application technology
- New research center scheduled to open (summer 2024):  
Kawasaki Frontience R&D Center

### Capital Investment

- Production facilities for mobility, semiconductor-related materials, etc.
- Sustainability-related (such as green energy)
- Logistics and other infrastructure facilities



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Takamura: In order for us to grow in the future as a manufacturer, we need to strengthen R&D, which is our foundation, and enhance our product lineup. This slide presents graphs of R&D expenses and capital investment. We are going to set record high figures for each in 2024.

As we are successfully developing new seeds, for some of which we are ready to shift to a capital investment phase. I'm most grateful for the progress we have made.

Morita: So you are willing to invest for growth. Are you going to build a new R&D base in the Tokyo metropolitan area?

Takamura: That's right. We had the General Center of R&D in Nagoya City, but we thought it was a little inefficient timewise when conducting development with B2B customers. That's why we decided to build a new R&D base in the Tokyo metropolitan area.



# Strengthening New Product/Technology Development Capabilities

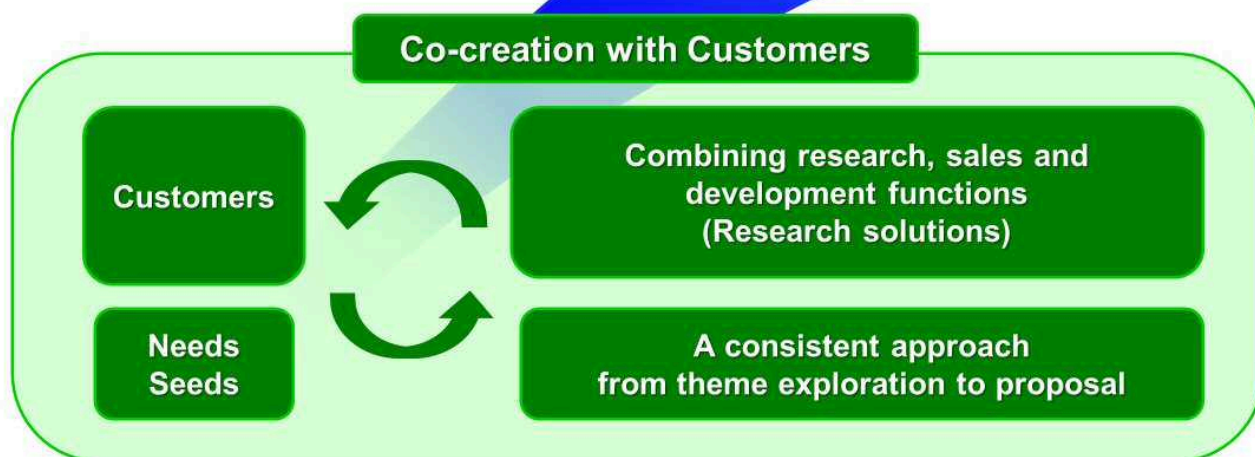
## Strengthening New Product/Technology Development Capabilities

### ■ Opening of Kawasaki Frontience R&D Center



Located within KING SKYFRONT Tonomachi International Strategy Base

Creation of new growth drivers  
Expansion of business domains  
R&D of next-generation materials



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Takamura: We expect to open the Kawasaki Frontience R&D Center this summer. We all know that merely building such a facility will not naturally lead to the creation of new products. We believe that the key to commercialization is how our researchers can take advantage of this environment and how they can develop products in collaboration with competitive players as user of our products.

Morita: This is a very “co-creation with customers.”

Takamura: Exactly.

Morita: It appears that many of your bases are located in the west from Nagoya City. So, this is an effort to promote joint R&D, involving power users in the east.

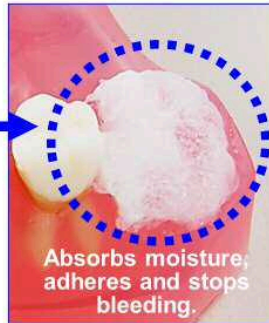
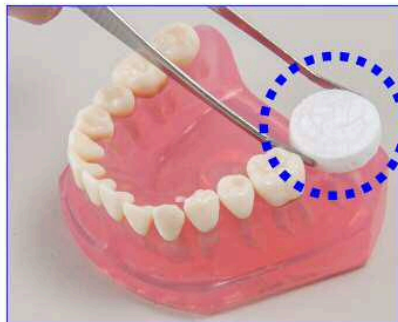


# New Product Development: Medical Care-related/Hemostatic Agent

## New Product Development: Medical Care-related/Hemostatic Agent

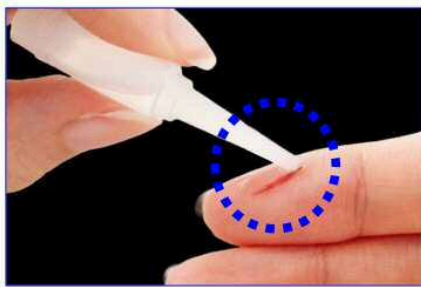
### ■ Medical adhesive materials for dental use

Hemostatic agent for use after tooth extraction. Scheduled to launch in summer 2024.



### ■ Adhesive for skin: Aron Alpha Skin Protect

Powerful protection and instant wound care. Launched in November 2023.



**Aron Alpha formulated specifically for medical use.**

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Morita: I understand that your next move will be to develop new products. What are the highlights of the new products that will form a new pillar of your business?

Takamura: As I explained earlier, we are focusing on the semiconductor-related materials and automotive battery materials, which are in the middle of further evolution. In other fields, we have medical adhesive materials for dental use.

We also launched an adhesive for skin, Aron Alpha Skin Protect, last year. In addition to this kind of products, we intend to focus our efforts on biomedical-related field extensively.

Morita: By applying the functions of Aron Alpha to a new product, you can use it for medical purposes as well.

Takamura: You are right. Only a manufacturer like us, who can blend and compound from undiluted solutions, can do this. We are determined to meet the needs of healthcare professionals.

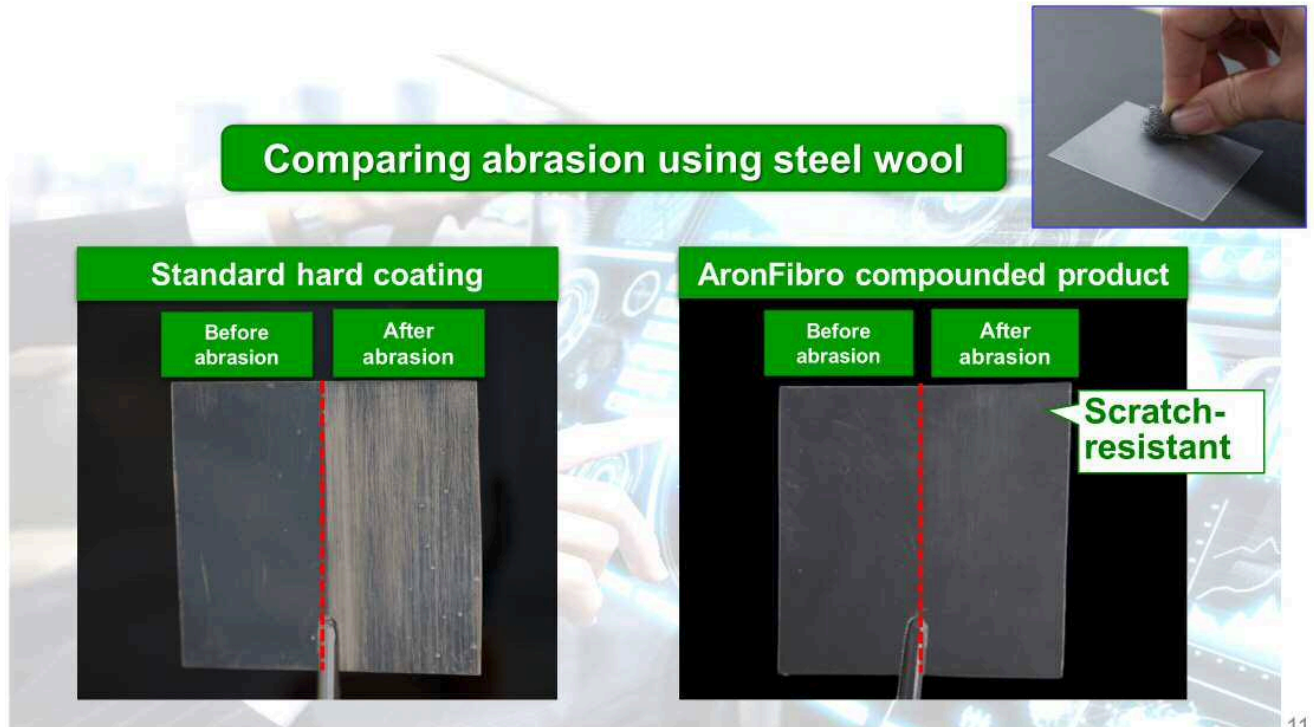
Morita: As you just mentioned, your company has the entire value chain from upstream, and it allows you to utilize the know-how, such as which parts of the value chain can be put to use and how to make the most of it, in actual product manufacturing. And it is one of your initiatives in the medical care field.

# New Product Development: Cellulose Nanofiber (CNF)

## New Product Development (Cellulose Nanofiber (CNF) )

### ■ Enhancing the functionality of our products

Adding CNF (our product AronFibro) to raw materials for hard coating agent (our product ARONIX) used to protect the surfaces of panels, etc. increases their hardness and makes them more scratch-resistant.



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Morita: Could you tell us about another field of new product development, cellulose nanofiber, or CNF?

Takamura: As this was mentioned here a couple of years ago, CNF improves elasticity and elongation when mixed with rubber. But we want to use it in a way that really makes the most of its functions, so we are now doing more research on this material.

One of its functions is that it is in fact highly resistant to abrasion and scratch and is not easily scratched even when rubbed with steel wool and the like. We are in the process of mixing this CNF into our products. It is truly a development in a direction that we had never thought of before.

Morita: It means, for example, display screens are less likely to be scratched, and we can make use of its function.

Takamura: That's how it is.

Morita: I understand. So, you see such products also growing into the fourth pillar.

# Enhancing Shareholder Returns

## Enhancing Shareholder Returns

100% total return ratio for FY2023–25



PBR: 0.65x (as of December 31, 2022) → 0.91x (as of April 15, 2024)

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Morita: Now, let me ask you about capital market-related matters. First, the stock price is up 23 percent from the beginning of 2023. The PBR has gone up quite a bit, but it is still 0.9x. How do you see this situation?

Takamura: Last spring, the Tokyo Stock Exchange (TSE) issued a call for improving PBR to exceed 1x as quickly as possible. So, we have been taking a variety of measures since last summer. I believe these efforts have helped the stock price to reach this level.

From now on, the question is how to effectively utilize the assets and properties we have, including enhancement of shareholder returns. While we will prioritize R&D and capital investment, we also consider the possibility of returning more to shareholders, and we will work hard to raise our PBR to over 1x as soon as possible.

Morita: From the viewpoint of our side, we believe that your company's strengths are the following points: that you have sufficient earning power or financial strength given a very long history; that you are able to invest for growth; and that, as a result, you are able to make record-high R&D expenditures and capital investments.

Not only that, you are also committed to shareholder returns.

Takamura: You are right. We have developed three-year medium-term management plans since 2017. In the previous and current plans, we have significantly increased dividends per share.

The amount of share buybacks will also be about 20 billion yen over the three-year period of the current medium-term management plan. We have not yet announced our plan for 2025, but we expect the total amount of dividends to be also around 20 billion yen.

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Morita: I believe you have set a rough target for the total return ratio of 80 percent. In reality, you have achieved 100 percent in the period from 2023 to 2025.

Takamura: Exactly. We have announced our total return ratio target to be 100 percent.

Morita: You have announced your targets and have been fulfilling them. But in fact, as of the end of December 2022, your PBR was still 0.65x.

Takamura: Yes, it was. Thankfully, as of April this year, it is 0.91x, very close to exceeding 1x.

Morita: In the material that you have published on your initiatives in response to the TSE's request, you state that you aim to achieve a return on equity (ROE) of 8 percent and a PBR of 1x or more by 2027. Do you have a favorable outlook on this?

Takamura: Yes, we will get it done even sooner. We are working on several plans to speed up the process, especially for the PBR.

Morita: Let me clarify your point one last time. You will continue to invest in growth, including the creation of the fourth pillar. You will also continue to make a strong commitment to shareholder returns, with a total return ratio of 100 percent for the period from 2023 to 2025 as the core target.

Takamura: That is correct. The Japanese economy is currently undergoing a major shift from deflation to inflation for the first time in 30 years. At about the same time, we are making robust R&D and capital investments to create the fourth pillar of our business. By ensuring that these investments bear fruit, and also by exceeding 1x in PBR, we are determined to meet the expectations of our shareholders. I ask for their continued support.

Morita: We had with us Mr. Mikishi Takamura, the president of Toagosei Co., Ltd. Thank you very much for your time today, Mr. Takamura.

Takamura: Thank you very much for having me.