



Seraya Plant on Jurong Island, Southwest Singapore, is a major Denka production base for styrene resins.

Walking the path of development together

40th Anniversary of Expansion into Singapore

Singapore will celebrate its 55th anniversary on August 9, 2020. This year also marks the 40th anniversary of Denka's expansion into Singapore. We established Denka Singapore Pte. Ltd. (DSPL) in September 1980. Our goal was to boost production of acetylene black, which is used for manganese dry cell batteries and cable coverings. At the time, Denka's Omuta plant had an annual production capacity of 22,000 tons of acetylene black, 70% of which was exported to other parts of the world. However, the demand for acetylene black in Southeast Asia had risen dramatically. Therefore, it was necessary to establish a base in Southeast Asia to reduce transport costs and respond to increasing demand in the future. Since Singapore was aggressively trying to attract foreign companies, we decided to establish our base there.

Later, we upgraded the acetylene black production facilities and expanded into other businesses such as "Denka fused silica," polystyrene, MS resin, "Clearen," "Denka IP," and "Toyokalon (polyvinyl chloride fibers)." In 2009, we established a holding company and began investing in companies not only in Singapore but also in Malaysia and Vietnam, and in 2017, Denka Life Innovation Research was opened. Also home to our model smart factories, which employ the latest AI/IoT technology, Singapore continues to function as the "control tower" of our global expansion.

Denka's growth is in line with the development of Singapore, and thus Southeast Asia. We will continue striving to realize our management plan "Denka Value-Up" through further globalization.



The DenkaWay

Summer

2020 | Vol.04



Our Passion, for Society

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Tackling the COVID-19 coronavirus

Our Passion, for Society

The spread of the COVID-19 coronavirus has led to dramatic changes in our lifestyles and raises fundamental questions about how companies, societies, and individuals should operate in the future. Our answer to these questions is that we will continue aiming to “be a company truly needed by society.”



Manabu Yamamoto
Representative Director, President

Drawing on our collective strength to stand against adversity

We would like to extend our deepest sympathies to those who are suffering from the COVID-19 coronavirus. We are praying for your swift recovery.

The Denka Group considers combating the COVID-19 coronavirus to be part of our social duty. In that regard, we have carried out two main initiatives.

The first is the production of diethyl malonate, the raw material for the anti-flu

medicine Avigan. We are the only manufacturer of diethyl malonate in Japan. With the collaboration of the Denka Innovation Center, Chiba Plant, and former employees, the Omi Plant has managed to restore equipment that was shut down for three years in a mere six weeks to fulfill a government request. Thus far, we have produced enough diethyl malonate to manufacture 2 million doses of Avigan.

The second is the development of a new antigen detection kit that can determine whether someone has the virus in a short period of time. We were able to develop this kit thanks to the technology and know-how that we have accumulated in our many years

of developing and manufacturing clinical test reagents for diseases such as influenza. We hope to deliver these kits to medical professionals as soon as possible to contribute to the expansion of testing.

These are “missions” that only Denka can accomplish. We will continue drawing on the collective strength of the Group to support life around the world.

A pioneer of the latest work styles

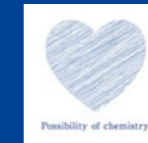
Meanwhile, it is also important to prepare for a post-corona world in order to continue

growing in these rapidly changing times. One of our growth strategies in the Denka Value-Up management plan is “operational process reforms.” The basic idea is to pursue the essentials. We will not be able to survive in a post-corona world unless we determine the essentials and take on new challenges.

We will actively promote work styles that give us more freedom with regard to when and how we work. Our goal is to improve the productivity of each employee and, in turn, strengthen the competitiveness of the company as a whole. We will start by utilizing telework and digitalizing documentation and the approval process at our head office, brand

offices, and business sites. As the main agents of change, employees will need to thoroughly discuss the new work styles at our manufacturing and research sites as we pursue the ideal Denka together.

The Denka Group will continue boldly taking on challenges to solve social issues with the aim of becoming “a company truly needed by society” that employees and stakeholders can be proud of.



Information on in-house COVID-19 coronavirus countermeasures

For up-to-date information on the Denka Group's efforts to prevent infections, please check the website below.

(<https://www.denka.co.jp/eng/covid-19/>)



Challengers for Denka Value-Up



Denka's COVID-19 coronavirus countermeasures

Events in Denka

2020

Jan.

- 6th The MHLW warns of a mystery pneumonia-like disease originating in Wuhan, China.
- 14th WHO identifies the COVID-19 coronavirus.
- 16th First case in Japan.
- 30th WHO declares global health emergency.

Events in society

Feb.

13th Development begins on antigen detection kit.

3rd A cruise ship carrying infected passengers arrives at Yokohama port.

Mar.

24th Denka Seiken signs joint research agreement with the National Institute of Infectious Diseases to develop diagnostic test kits.

27th Head office employees begin teleworking.

Apr.

2nd Decision made to supply diethyl malonate, a raw material for the drug Avigan.

16th President Yamamoto meets Prime Minister Abe

7th State of emergency declared in seven prefectures in Japan.
16th State of emergency extended to the entire country.

May

16th Manufacturing of diethyl malonate begins.

25th State of emergency ends.

Jun.

1st Shipping of diethyl malonate begins.

Mission 1 Manufacturing of Diethyl Malonate for Avigan®*

As Team Denka, We Can Overcome Any Obstacle

“We would like you to resume manufacturing of diethyl malonate.”
On March 26, Denka received this request from the Ministry of Economy,
Trade and Industry.
It took a mere six weeks to restart production.
How did Denka accomplish this feat?

*Avigan® (generic name: Favipiravir)
Avigan is a registered trademark of FUJIFILM Toyama Chemical Co., Ltd.



Masanobu Kosaka
Leader
ME Project
Deputy Manager
Omi Plant



Shin Sugimura
Sub-manager
Manufacturing Group
ME Project
Organic Materials
No. 1 Dept.
Omi Plant



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ME Project
Organic Materials
Research Dept.
Omi Plant
Engineering Dept.



Masatoshi Kawai
Analysis Group
ME Project
Quality Assurance Dept.
Omi Plant



Taking on an unprecedented challenge

“We would like you to resume manufacturing of diethyl malonate.” Denka received this request from the Japanese Ministry of Economy, Trade and Industry on March 26.

Clinical trials had begun on the anti-flu drug Avigan in the hopes that it would prove effective against the COVID-19 coronavirus. With the intention of establishing a complete domestic supply chain, the government sought to ensure that the raw materials could also be manufactured locally. The main raw material of Avigan is diethyl malonate, and as

the only domestic manufacturer, Denka was singled out for this task.

However, there was a large problem. Omi Plant had manufactured diethyl malonate from 1983 to April 2017. In other words, the necessary facilities had lain idle for three years.

Deputy Manager Masanobu Kosaka, who was put in charge of this project, explains the situation as follows: “We had two major tasks. The first was to restore the production equipment, which hadn’t been used in three years, within a month. The second was to manufacture catalyst for the production of diethyl malonate from scratch. It was an

unprecedented challenge.” On the following day of March 27, a project system was established in Omi Plant. Restoration work on the equipment began in early April.

Speed honed through the carbide production chain

“I was honestly surprised that we were aiming for one month,” says Takumi Hosaka, Equipment Maintenance Group, who led the efforts to restore the equipment. “We shut down those facilities expecting to never need them again, so everything was in quite a state.” Most of the rotating equipment would

not move, and the pipes were corroded and deteriorated. Recovery within a month seemed impossible.

However, no one gave up, especially Hosaka. “In addition to our employees, local construction subcontractors, machinery manufacturers, and trading companies were all willing to pitch in.” By adjusting delivery schedules and swiftly arranging for new machinery, they were able to secure the necessary resources. Restoration was possible through the collective strength of the Group.

Shin Sugimura, who led the manufacturing team tasked with both restarting the plant and operating it, comments, “The production

of diethyl malonate uses dangerous gases such as monochloroacetic acid and carbon monoxide. That means a leaky pipe can be a matter of life and death. As such, we were very careful about inspecting each area when we put our production system together.” Even the most daunting tasks can be overcome by working together as a group. And so, approximately one month later on May 1, the plant passed the fire prevention inspection and was ready for operations.

“I think it was all possible thanks to the characteristics of this plant,” Sugimura continues. “Here at Omi Plant, we have a carbide production chain that includes every-

thing from the mining up to the production of chloroprene rubber products. No part of this chain must ever be cut off. So, if there is any faulty equipment, we have to fix it immediately. I think the speedy recovery was possible due to the technique that we have developed working under these circumstances."

A carbide production chain that must continue running day and night. This is unmistakable proof of Omi Plant's bond.

Using Group knowledge to search for new possibilities

While the manufacturing facilities were being restored, work was also being done on cre-

ating catalyst. Production of diethyl malonate begun forty years ago, but there were no employees left from that period. "We had some documentation left from that period," explains Wataru Nishino from the Lab Group. "However, it was out-of-date, and we didn't have much faith in the older technologies it referred to. So, we contacted some former employees, and with their help, we managed to update the documents and produce some catalyst."

However, Nishino's problems did not end there. The next issue was the amount of catalyst needed. Omi Plant was only capable of producing one liter. Production would require over a thousand. So, Nishino requested help from Denka Innovation Center in Machida,

Tokyo and the Denka Chiba Plant in Ichihara, Chiba Prefecture. Denka Innovation Center added a further 300 liters. Then, Chiba plant proposed a plan to manufacture 3,300 liters and transport it to Omi Plant. "I had never been involved with the manufacturing and transporting of catalyst before, but there was no time for failures, so I made sure that there were multiple backup plans in place. By bringing together the knowledge from each site, we were able to discover new possibilities and keep losses to a minimum."

Since he traveled between Niigata, Tokyo, and Chiba, Nishino spent two weeks in self-isolation after crossing prefectural borders. "But although I wasn't free to move

around, I tried to maximize communication with my colleagues." Those efforts bore fruit, and they were able to successfully produce and transport the catalyst.

On May 10, production started with the first 1,000 liters of catalyst. In the latter half of May, they entered the final process of removing impurities. Masatoshi Kawai from the Analysis Group was in charge of developing the process and shipping inspection systems. "To ensure the highest quality, we are currently in the process of reexamining each process. This is new work that wasn't done three years ago. Like the Manufacturing Group, we set up a three-shift work system and focused on ensuring stable shipments."

Thanks to the efforts of Kawai and the others, the first batch was shipped on June 1 as scheduled. "We got this far thanks to cooperation across the Group. If even one of those departments were missing, I don't think we would have succeeded." As a result, enough diethyl malonate was manufactured by the beginning of July to produce 2 million doses of Avigan.

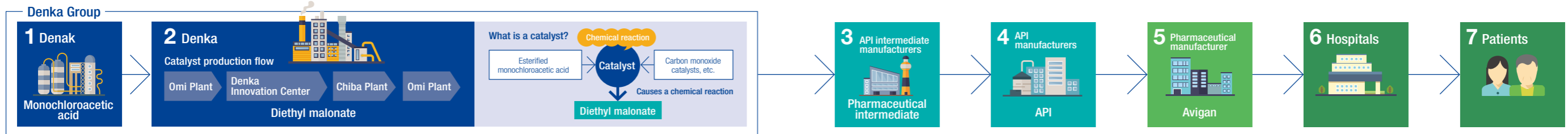
Team Denka for the future

"There is no obstacle that we cannot overcome if we work as Team Denka. Our success proves it," comments Kosaka. A total of 200 people participated in the project,

including staff from the Denka Innovation Center, Chiba Plant, and partner companies. Kosaka says that he is proud of everyone. "Despite all the difficulties, every employee tackled this task quickly and without complaint. The Denka Group was united in the face of the coronavirus crisis. I think many employees have also experienced how amazing it feels to contribute to society. I hope that they will pass those feelings on to future generations. Because contributing to society through the power of chemistry is what Denka is all about."

Excellent technology, deep knowledge, and a passion for contributing to society. That is Team Denka!

The process of delivering diethyl malonate to patients >>>>



Monochloroacetic acid is a raw material of diethyl malonate. Denka, a Denka Group company, is the only producer in Japan.

Diethyl malonate is a raw material of Avigan. A catalyst is necessary to cause the chemical reaction that produces diethyl malonate. The catalyst was manufactured at Denka Innovation Center and Chiba Plant and transported to Omi Plant.

Pharmaceutical intermediaries are produced from the diethyl malonate manufactured by Denka

APIs (Active Pharmaceutical Ingredient) are produced.

APIs are used to produce Avigan.



Mission 2

Development of a COVID-19 coronavirus antigen detection kit

The Culmination of 70 Years of Experience

Denka has developed and manufactured diagnostic kits for various infectious diseases by taking advantage of antigen antibody reaction techniques. Under our mission of “protecting people’s health,” we have developed a COVID-19 coronavirus antigen detection kit.



Fumio Gondaira
Deputy Manager
Gosen Branch, Denka

Mission

“We have a duty to support infectious disease countermeasures.”

Denka Seiken, which plays a central role in the healthcare business, was originally established in 1950 to eliminate the infectious diseases that had become a social issue in postwar Japan. Since then, it has been supporting measures against infectious diseases in Japan for approximately 70 years. Currently, it holds the top market share for Quick Navi-Flu2 Influenza Diagnostic Kits in Japan and also provides the majority of kits for diseases like Group A streptococcus and norovirus.

Whenever a new infectious disease emerges, we strive to provide medical institutions with diagnostic kits as quickly as possible. I remember working many late nights to develop and supply diagnostic kits during the enterohemorrhagic escherichia coli O157 outbreak in the 90s. Our mission is to deliver diagnostic kits to medical professionals as soon as possible. To that purpose, we have already begun work on an antigen detection kit for the COVID-19 coronavirus.



The COVID-19 coronavirus antigen detection kit developed at Denka Gosen Plant in Niigata Prefecture (the picture is for illustrative purposes only). QuickNavi, which is already widely used in the medical field, was used as a platform.



Response capabilities



“Overcoming the ever-changing situation.”

In the early stages of the outbreak, we were unable to ascertain clinical features, and the national policy was changing every week. Originally, our antigen test was meant to screen for the possibility of infection, after which a diagnosis could be done by PCR. However, that policy changed later, and the antigen test was also expected to be used for diagnosis. The test was also modified to use saliva, which is less accurate than a nasopharyngeal swab sample, to improve efficiency. With each change of policy, a higher testing accuracy was expected. However, Denka has been combating emerging infectious diseases and supplying diagnostic kits for many years, so we were more than up to the challenge.

Collaboration

“Collaboration between research institutions accelerates development.”

We cannot win the battle against emerging infectious diseases without the cooperation of universities and research institutions. In this case, we quickly established a joint research system with the National Institute of Infectious Diseases (NIID) to share information and materials and evaluate products. In particular, NIID’s SARS* coronavirus antibody was found to react to the COVID-19 coronavirus, which shortened the development process by more than half a year.

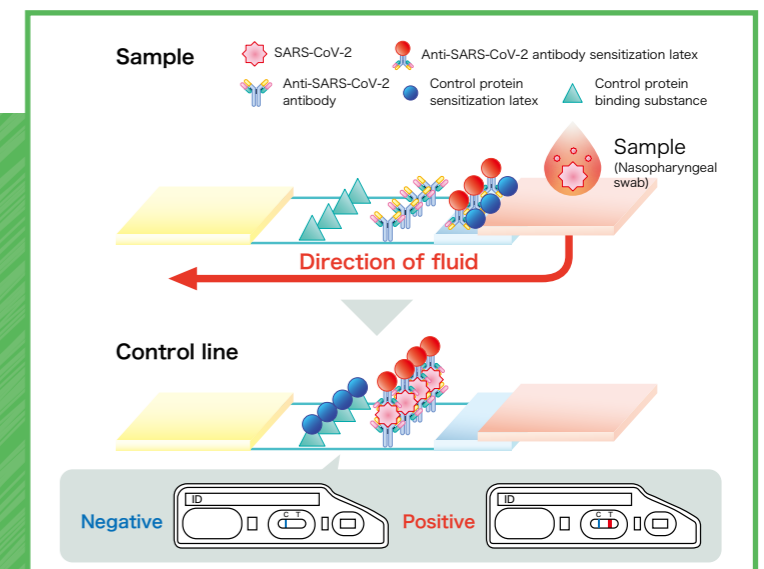
Collaboration within the Group was also invaluable. We utilized the Life Innovation Research Center’s gene recombination technology to accumulate stocks of antigens and antibodies for development. The internal and external collaboration systems built up over many years helped to accelerate the development of the antigen detection kit.

*SARS (severe acute respiratory syndrome) is zoonotic disease caused by SARS coronavirus (SARS-CoV).

Mechanisms

Antigen detection kit mechanisms

QuickNavi, the platform for the COVID-19 coronavirus antigen test, determines the results using the immunochromatography method via the capillary phenomenon. When a nasopharyngeal swab sample is placed on kit’s nitrocellulose membrane, it slowly dissolves the reagents as it moves towards the test line. If the sample contains antigen, the detection line turns red, indicating the possibility of infection. Immunochromatographic test kits are convenient in that they can produce a visual answer in a short period of time and can be stored at room temperature.



Evolution

“Making the ‘navi’ even better than before.”

Although the PCR test has higher accuracy, it requires specialized equipment and personnel and takes several hours. On the other hand, Denka's Quick Navi, which is widely used in hospitals and clinics, can detect a virus in 15 minutes and the flu in as little as one minute. In this way, our test supplements the drawbacks of the PCR test and is expected to contribute to quickly identifying superspreaders*. This fast and accurate test was a culmination of our work on diagnostics kits.

*Superspreader: Someone who spreads an infection to a large number of people.



“A consistent production system to ensure a stable supply.”

We must not disrupt the work of medical professionals. To that purpose, we have built a robust production system to maintain a stable supply of diagnostic kits. We are able to produce 100,000 QuickNavi tests a day, which is more than double the capacity of other companies in the same industry. Even in years with major flu epidemics, we have never failed to keep up with demand. We intend to provide a stable supply of kits so that the testing scope can be expanded, and anyone can be tested if necessary.

Stable supply

The future

“Aiming for global prevention of epidemics.”

It usually takes 2-3 years to develop an antigen detection kit, but Denka was able to carry out development and production in a much shorter period. This speed was realized through our long-cultivated antigen antibody reaction technologies and collaboration with different research institutions. All our departments, including manufacturing, quality assurance, and sales, are working together to deliver this kit to customers as quickly as possible. We are currently developing antibody tests in parallel. In order to contribute to the prevention of infectious diseases around the world, Denka will continue this project with overseas expansion in mind.



Denka's ^{Mission} 3 New Normal

Advancing “Work Style Reforms”

New work styles form the basis of our preventative measures against the COVID-19 coronavirus. With the post-corona world in mind, we will introduce examples of work style reforms at each of the Denka Group's worksites.



Laying the foundations for telework!



The Digital Innovation Dept. was newly established in April 2019.

In order to strategically build and operate an information system for the entire Denka Group, they have been promoting data utilization, introducing advanced systems, and strengthening security. They are laying the foundation for new, innovative processes.

Our preparations led to success Speedy implementation of a telework system

Ahead of the April full-scale launch of the telework system that was being tested by the HR dept. in FY2019 and the global sporting events to be held in July, the Digital Innovation Dept. was working on creating a telework infrastructure with the HR and Corporate Planning departments. But then, the COVID-19 coronavirus outbreak occurred. A number of Denka production sites in China were closed, and the number of infections in Japan continued to grow.

"We needed to quickly establish a system that would allow us to work from home," explains Horio. First, they listed the departments whose work would likely be affected. Next, almost 150 laptops were produced for employees who usually worked on desktop PCs, such as plant management staff. In addition, the VPN (Virtual Private Network) connection was improved so that the company's network could be accessed from remote locations. In this way, the telework system was introduced without

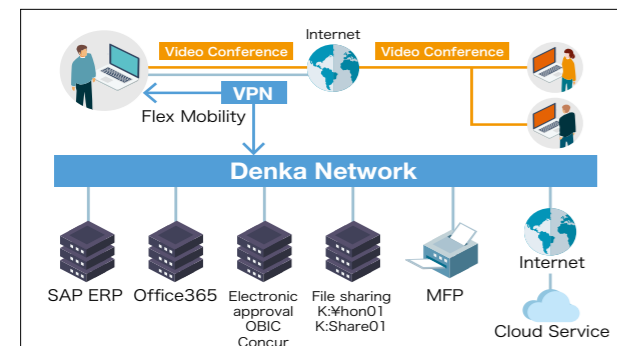
any major issues. "We were able to get the system up and running quickly because we had already begun preparing in advance." In that way, teleworking was realized thanks to preparations by the Digital Innovation Dept., who is responsible for the Group's IT systems.

We need to talk about the future as a group

"In the future, I think that we will need to have further conversations on work style reforms throughout the Group," says Kawahara. The reason, he explains, is a change in employee awareness. "We were able to adapt to paperless and remote systems without being held back by conventional wisdom. This is an opportunity to clarify the type of work styles that Denka should be aiming for. It is important that each department shares their ideas so that we can all work in the same direction." In order to grow further in a post-corona world, manufacturing, research, sales, management, and all the other departments will need to freely discuss opinions from their different perspectives.



Katsuji Horio, Information Systems Manager, (right) and Mikine Kawahara, Digital Strategy Manager (left)



VPN network structure

Launch of the Reform Project!



As part of operational process reforms, the Corporate Planning Dept. intends to start working on problems specific to each business department. The Electronics & Innovative Products team was selected as a trial, and the Reform Project was launched.

First, a questionnaire was given to the 101 people working in the Electronics & Innovative Products team to identify issues that they were experiencing in their daily work. Moving forward, the Corporate Planning Dept. will be studying specific ways to solve those problems through workshops and other means and proceeding with initiatives related to work style reforms.

Online office visits!

Every summer, President Yamamoto comes to inspect the various business sites. As a measure to prevent infections, it was decided to hold these inspections online using the web conference system. Starting with the Omi Plant on June 30, a total of 7 online inspections are scheduled to be conducted by early August.

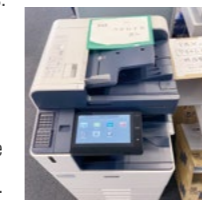
At the Omi Plant, after urging staff to maintain a safe and secure workplace, President Yamamoto held dialogues with workplace representatives, exchanged opinions with labor union leaders, and discussed issues with plant management. Although this was the first time conducting it online, everything went very smoothly.



Automatic conversion of faxes to PDFs!

In addition to discussing fax machine replacements with the Digital Innovation Dept., Osaka Branch has introduced a system to automatically convert faxes to PDFs. This makes it easier for those working remotely to check faxes.

This system is also being introduced at other branches, and they are also considering remote control of fax machines.



Sharing presentations across time and place!

The Research & Development Dept. held an annual in-house academic conference with 150-members via Zoom. Before the event started, they shared materials and videos online to help participants deepen their understanding. In addition, the presenters made videos to introduce themselves and encourage people to tune in to the presentations.

On the day, approx. 150-200 people connected via 100 access points (individual and meeting rooms). This new style of symposium was created through the ideas of members of the Research & Development Dept.



Improving Omuta Innovation Hub operations!

At Omuta Plant, work has begun at the Omuta Innovation Hub office. Up until now, there were only a limited number of meeting rooms that could be connected to the network. However, in the new offices, it is possible to connect anywhere, allowing staff to check and edit materials, have meetings via Zoom, and share information online. This has saved travel time and improved work efficiency.

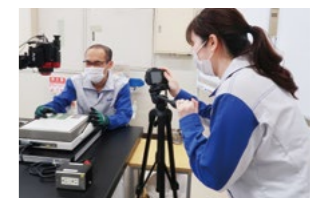


A meeting

Advertising product features through videos!

The Denka Innovation Center previously prepared samples of products for customers to see and touch. However, with everyone working from home, a new means of sharing information was necessary. To replace the samples, they began creating videos to introduce the features of products and technologies. In addition to drawing on old commercials and gestures to convey the feeling of products, they also used hot plates and ice to demonstrate thermal conductivity in an experiment video.

These videos are already in use and have received positive feedback. Denka Innovation Center will continue making improvements and contributing to open innovation.



Special Interview

Interview with Senior Technical Advisor Masahiro Ibukiyama,
winner of the METI Minister Award at the FY2019 Industrial Standardization Awards

For Trusted Innovation

Senior Technical Advisor Ibukiyama, who serves as the Japanese representative and chairman of the secretariat committee of ISO/TC206 (Fine Ceramics) and who contributed to the establishment of international standards for phosphor materials used in white LEDs* published in 2017, was awarded the METI Minister Award at the Industrial Standardization Awards. As someone who has long been involved with Denka's R&D, we interviewed him about his thoughts on innovation.

*ISO 20351: Fine ceramics - Absolute measurement of internal quantum efficiency of phosphors for white light emitting diodes using an integrating sphere



Masahiro Ibukiyama

Technician (Chemistry Department)
Senior Technical Advisor
New Business Development
Department

Contributing to standardization out of a sense of duty

Why did you tackle international standardization of the evaluation method for phosphor materials' optic properties used in white LEDs? To respond to the trust placed in us as a chemical manufacturer.

In 2010, there was a mainstream evaluation method used in the phosphor industry. However, without any JIS or ISO, there was a large degree of variation in the results produced by different measurement agencies, so it was not very reliable. Objective, data-based numbers are necessary to express the characteristics of chemical materials. If different companies use different evaluation methods and procedures, it leads to greatly varying results, making it impossible to determine an evaluation "standard." Without a standard, you cannot compare data. In other words, there is no basis for what should be objective numbers. Providing products based on these baseless numbers undermines the trust in chemical manufacturers. Naturally, this was a major problem that also affected Denka. Therefore, as a researcher, I saw it as an issue that had to be solved.

I have been participating in the Japan Fine Ceramics Association's standardization activities since 1996. Since 2005, I have also been involved with the ISO's TC206 and worked on international standardization of fine ceramics with researchers in Japan and overseas. In the course of this work, I made proposals for the standardization of phosphor evaluation methods, and the process is still ongoing.

Innovation is born from a summation of different skills

From the 60s, Denka conducted internal research that has become the foundation of many of our ceramics products. However, it can be difficult to determine what kind of finished goods are in demand, and researchers are often unable to ascertain market needs and development trends.

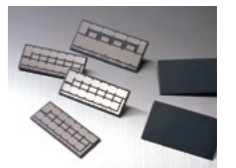
Ceramic phosphors were originally proposed by the National Institute for Materials Science (NIMS), with whom we had a working relationship after a researcher exchange program in the 90s. R&D began in 2003, but later, when considering a joint development with a TV equipment manufacturer, it became clear that there was a strong demand for ceramic



Some of the Denka products that Mr. Ibukiyama was involved with.

From 1984 Denka AN Plate®

A high thermal conductivity ceramic substrate used in industrial machinery and vehicle parts. Under his supervisor's instructions to "search for his own research topics," he conducted a 5-month independent survey and began working on this development. As a result, he was able to create a substrate with high insulation and heat dissipating performance as well as seven times the thermal conductivity of alumina.



In the late 90s Toretaro®

The first fertilizer registered on the fertilizer official standard "Fused Silicic Acid Phosphate Fertilizer" newly established in 2001 based on Denka's application. The development was completed in a short period of about half a year.



From 2003 Alonbright®

β -SiAlON phosphor was the world's first green-emitting phosphor for white LEDs. Phosphors were an unknown field for Mr. Ibukiyama, but he accumulated knowledge through joint development with the NIMS, LCD device manufacturers, and so on. This led to the creation of the phosphor business, and he received four awards, including the 36th Inoue Harushige Prize.



No.04

To Continue Writing for a Long Time

Novelist



Banana Yoshimoto

Born in 1964. In 1987, she made her author's debut and won the Kaien Newcomer Writers Prize for *Kitchen*; in 1988, she won the Izumi Kyoka Literary Prize for Literature for the novella *Moonlight Shadow*; and in 1989, she won Best Newcomer Artists Recommended by the Minister of Education for *Kitchen* and Transient/Sanctuary and the Yamamoto Shugoro Literary Prize for *Goodbye Tsugumi*. She's also well known overseas, having taken the Literary Prize Scanno, the Fendissime Literary Prize, and the Capri Award in Italy. Many of her works, including *Kitchen*, have been translated and published in over 30 countries.

Maintaining the two "water tanks" of maintaining fans and exploring new territory

I want to continue writing for a long time. As a novelist, this sentiment is very important to me.

Novelists cannot survive without readers. To continue writing for a long time, you need the support of a certain number of readers. If you just write what you want, how you want, those readers will get bored. It's also important to find something that only you can write. You need to examine your own characteristics to differentiate yourself from other novelists.

When it comes to card games or board games, I'm the type of person who always gets an average score. I cherish that characteristic and always try to find a balance between trying new things and sticking to what I know.

I always imagine two water tanks. One represents my current fans and the other represents new fans. You can't just focus on currying favor with your fans, nor can you only focus on acquiring new fans. So, I try to keep the water levels in the two tanks in balance, while observing my own feelings and the changes in society around me.

Life has ebbs and flows, and what goes up must come down. Just like with novels, when you're selling something, you want to keep those waves as small as possible. How can one do that? All I can do is continuously strive to produce good work.



Doubting norms and continuously striving to produce good work

You cannot create something unique just by getting fired up with enthusiasm. Rather, it's a matter of sticking to the basics, striving to produce good work, and occasionally noticing, "Wait, maybe I could try this?"

It's also important for a novelist to work steadily. A novelist's work is usually published after a proofreading process, during which editors and reviewers check for typographical errors and omissions and make sure the text is uniform. However, some books don't go through this process. Professionals can tell at a glance, and the general public may notice something slightly off about it. Subconsciously, they might think, "This isn't a good book." There's a reason why something sells. You cannot achieve good results by neglecting steady work.

On the other hand, sometimes it's necessary to push through what you believe to be right. When I was making my debut, I directly negotiated for the right

to decide on the cover. In the publishing industry, it's a major taboo for a newcomer to do so, and I faced fierce opposition. However, I refused to give ground. Looking back, I think I've been able to continue writing for so long because I was able to break this taboo.

I think that my biggest regrets in life were times that I couldn't break taboos. While overriding norms doesn't always lead to success, it usually gives above average results. Push for what you believe in without backing down. This determination is essential for getting your feelings across.

DENKA TOPICS

Introducing Denka Group news topics from April to June 2020

Apr.

Mr. Ibukiyama's interview on winning the METI Minister Award published

Mr. Masahiro Ibukiyama, Denka's Senior Technical Advisor, was awarded the FY2019 METI Minister Award, and his interview was published on the homepage of The Ministry of Economy, Trade and Industry. Mr. Ibukiyama was recognized for his contributions as the Japanese representative and chairman of the secretariat committee of ISO/TC206 (fine ceramics), as well as his efforts in establishing the international standard for phosphors used in white LEDs.

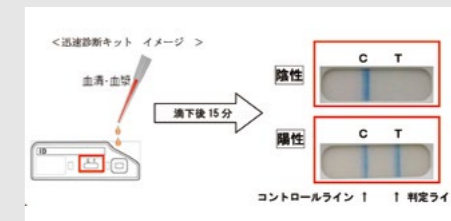


Apr.

Applied for approval to domestically manufacture and sell Ebola Virus rapid testing kits

On April 10, we applied for approval to domestically manufacture and sell Ebola Virus rapid testing kits, which were co-developed with Hokkaido

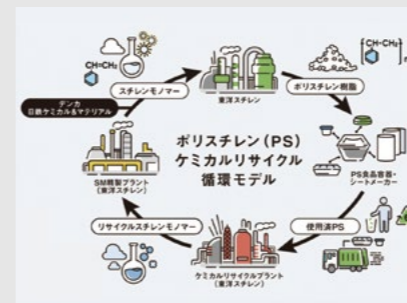
University. This kit allows for complete diagnosis in about ten minutes and is also convenient for areas that lack sufficient medical facilities as it requires no special equipment. In applying for Japanese regulatory approval, which is internationally recognized, we hope to see this kit officially adopted in African countries.



Apr.

Toyo Styrene begins laying foundations for polystyrene resin chemical recycling business

Toyo Styrene Co., Ltd., a member of the Denka Group, has begun laying the foundations for its used polystyrene recycling business. They are currently planning the establishment of a demonstration facility that pyrolyzes used polystyrene and recycles it into styrene monomer. Operations are scheduled to begin at the end of FY 2021.



Apr.

ESG Information Site launched

We launched a new corporate website called the "ESG Information Site." This website was launched following an overhaul of the CSR Information Site, which was launched on September 2018, and offers better readability and searchability through a ESG list and a GRI comparison table. We will aim to further promote interaction with our stakeholders through this website.



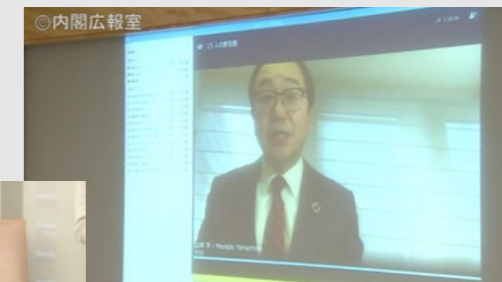
Apr.

President Yamamoto attended a conference with Prime Minister Abe Our supply of diethyl malonate was featured on TV programs

A video conference between Prime Minister Abe and top executives of companies that contributed to preventing the spread of the COVID-19 was held on April 16. Denka was invited as a company that supplies diethyl malonate, a raw material for Avigan® Tablets. President Yamamoto participated in the conference, and stated that Denka aims to fulfill its corporate social responsibility by working as one to supply raw materials for Avigan as steadily and quickly as possible. In addition, our production of diethyl malonate was featured in news programs, and executive officers Mr. Suzuki and Mr. Imai respectively appeared in the interviews.



President Yamamoto's video conference with Prime Minister Abe



「共創安全」

皆と安全を創ろう



Suzhou

Zhou Youlin
Electronic Products Manufacturing Dept.
Deputy Manager
Denka Advanced Materials (Suzhou) Co., Ltd.

I like music! I like challenges!

Joined in 2007. He manages slit production sites, promotes safety of work-site operations, and aims to improve productivity.

Due to the COVID-19 pandemic, it took half a month to restart our operations. Since restarting, we have been prioritizing employees' safety and practicing preventative measures such as taking temperatures, washing hands, and wearing masks. I feel that this raised each employee's safety awareness. We are also communicating with expats in Japan through web meetings. Though we sometimes find it inconvenient, we are getting through our daily tasks and further strengthening our sense of unity.



How are things in the USA, Tricia?



USA

Tricia Thompson
Human Resources & General Affairs Manager
Denka Performance Elastomer LLC

Gives back to the Community

I am the mother of two rescued fluffy dogs!

Joined in 2015. She manages all aspects of the company's human resources, training, and general affairs and serves as Corporate Social Responsibility Leader.

With the exception of essential plant staff, we began teleworking mid-March. Our IT Team created and provided staff with everything needed to be successful working from home, and we have made good use of Skype to conduct meetings both internally and externally. For efficient telework, managers have been holding weekly or bi-weekly meetings. We are practicing open communication and seeking to create our "new normal".



How are things in Taiwan, Jessica?



Taiwan

Liu Yizhen (Jessica Liu)
Denka Taiwan Corporation

相手の立場に立って考えましょう!

Put yourself in the other person's shoes!

I love the sea!

Joined in 2020. As a member of general affairs and accounting, she oversees deposits and withdrawals, ensures compliance with Taiwanese laws, supports management, and handles inquiries.

Before the COVID-19 pandemic, we at Denka Taiwan had already adopted online banking to improve efficiency and transparency for deposits and withdrawals. We are currently focusing on internal and external communication via Zoom, a video communication tool. We have found this tool more convenient than telephoning to share information, as it enables us to communicate and share materials with multiple participants at once.



How are things in Shanghai, Zhang?



Shanghai

Zhang Shengyu
Denka Seiken (Shanghai) Co., Ltd.

山川异域，风月同天

Rivers low, mountains high, the same moon in the sky.

Be cheerful and ready for tomorrow!

Joined in 2009. He is in charge of sales expansion and marketing in the Chinese market, handling biochemistry and immunodiagnosics for the Life Innovation Division.

Since I started working from home, I have matched my working time to that of Head Office in Tokyo. I like it because telephone meetings are possible without worrying about the time difference. I also send daily reports about tasks and industry news to the relevant departments. Sharing information about the latest situation surrounding COVID-19 in China, the influence on the industry, and the process of vaccine development helps them to plan their strategy.



Singapore

Fendy
Production / Technology
Denka Advantech Pte. Ltd.

How are things in Singapore, Fendy?

I love to eat and exercise!

Joined in September 2016. As a process engineer, he provides technical support for the Fused Silica Department.

The global COVID-19 pandemic has accelerated the digital transformation of workplaces at an unprecedented rate, leading us to adopt Zoom and Microsoft Teams. We are hopeful of navigating these uncertain times by continuing to foster workplace collaboration and incorporating technological trends.



How are things in Japan, Toshiyuki?



Japan

Toshiyuki Yamaguchi
Sales Dept. 2nd Sales Division
Toyo Styrene Co., Ltd.

My pet medakas keep laying eggs. It's a pretty kettle of fish!

Joined in April 1997. He handles sales of polystyrene, mainly engaging in sales expansion of advanced materials in the optics field.

To clearly separate work and our private lives while working remotely, we hold team meetings every morning and write daily reports at the end of each day. We communicate with customers and agencies more frequently via web meeting tools or telephone and conduct office tasks as usual via Magic Connect. These practices have proven beneficial, so we would like to maintain them after the COVID-19 crisis is over.

One Team on the Web!

LINK GLOBALLY, LINK FUTURE

Group members around the world, working toward the future of Denka

The Denka Group has 6,000 employees around the world. We posed the following question to members from different countries.

Theme Changing work styles

Mutual Respect And Collaboration