



## December 2021

In the last newsletter 2021, we focus on Reactive Recycling, what the offer looks like, that we have received a first commercial order and a good reception on the market. We visit several fairs, Interplas UK, Plastteknik Nordic and Plastic Recycling World Expo. We talk about new innovations and also get to meet two new employees, the chemist Rodrigo Gouy and the production manager Jörgen Heby. Nice reading!

CEO JOHAN ARVIDSSON HAS A FEW WORDS TO SHARE

# Nexam Gears up for 2022



Continue on next page



# "I would like to take this opportunity to thank all our readers and investors as well as clients and colleagues for a fantastic year."

As the second year of the pandemic draws to a close, we can announce that Nexam is heading for yet another year of growth. As a company, we are achieving what we set out to do, and had it not been for the general raw material shortages and logistics challenges, we could have performed even better.

As always, our newsletter is the channel where we think and look ahead. For a company like Nexam, I think it's particularly important to look to the future. We offer unique solutions in growing markets and are an integral part of our customers' innovation efforts. This means that we create long-term sustainable business that is progressively optimised and improved. We are therefore only at the beginning of a long journey.

At the beginning of the year, we launched Reactive Recycling as a brand and concept. The aim was to clarify our offering in recycling by bringing all products related to the field under the same umbrella brand. Now our efforts are starting to generate business. We are pleased to have successfully commercialised this area during the year. In addition, several exciting projects are underway and we see many potential business opportunities. This is an area that will increasingly contribute to our growth in the future.

We see growth in several of our businesses and there is a great challenge in both growing and optimising the operational part of the company in the same process. Nexam is a manufacturing compa-

ny, predominantly with proprietary products. Our production system is complex and we have factories of our own as well as external players, raw material suppliers and extensive global logistics. The strong growth is testing this system. To ensure continued stable deliveries to our growing number of customers, we are very pleased to have been able to strengthen the organisation with a new Chief Production Officer, Jörgen Heby. Jörgen brings with him a wealth of experience from the chemical industry and is a very welcome addition to our team.

It is said that the best results are achieved under pressure. There is already a defined target for turnover rate for our coming year. A target that was defined at the beginning of 2020. I don't think we would have ever imagined that a global pandemic would affect our business for more or less the entire time since the target was set. However, we remain committed to the target, even though it is challenging. We will do our utmost to achieve this target in the coming years. Sure, it puts a little extra pressure on us, but it's also very inspiring.



This year is coming to an end and we are approaching Christmas and a well-deserved break after an eventful period. I would like to take this opportunity to thank all our readers and investors as well as clients and colleagues for a fantastic year. Next year, we will be aiming even higher.

Happy reading!

# Market focus: Towards Increased Plastic Recycling

Every year, over 400 million tonnes of plastic is produced worldwide. Annual global production has doubled in the last 15 years. However, plastic recycling has not developed at the same pace. On average, around 15 per cent of the world's plastics are recycled each year. The majority of the remainder is burned or landfilled. In other words, there is a huge potential for improvement, and both legislators and consumers have a strong drive to increase recycling rates.

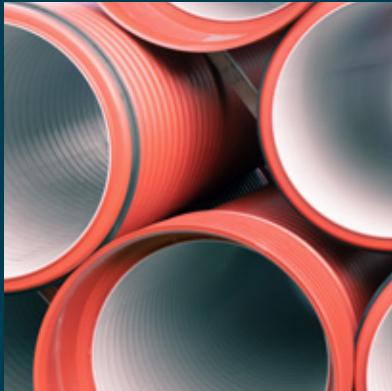
One challenge faced by both recyclers and producers is that the quality of the recycled plastic is often poor in relation to its intended use. The solutions available are both time-consuming and require large investments.

Reactive Recycling is therefore a welcome addition to the market: a cost-effective solution that does not require a large initial investment. Furthermore, it can make the current process used to process recycled material more time efficient.

## Three benefits with Reactive Recycling

- ❶ Upgrades low-grade plastics to enable the use of products that consist of 100% recycled plastic instead of mixing in virgin materials.
- ❷ Requires no investment in new equipment, which makes it widely available in the market.
- ❸ Significantly increases time-efficiency of the current method used for processing recycled plastics.



**Polypropylene (PP) products:****NEXAMITE R201**

Polypropylene is one of the world's most widely used plastics. You can find the material in packaging and caps and closures, for example. Our additive NEXAMITE R201 enhances the polypropylene, which gets improved flow properties, higher melt strength and improved mechanical properties. NEXAMITE R201 improves the quality of lower-grade plastics, making them attractive to both plastic recyclers and manufacturers.

**Polyethylene (PE) products:****NEXAMITE R301**

Polyethylene is also one of the most frequently used plastics in the world. Its chemical structure makes it well suited for products such as packaging, bottles and film. Our additive NEXAMITE R301 upgrades the material and provides it with improved flow properties, higher melt strength, enhanced ESCR, and improved mechanical properties.

**Products in PET and rPET:****NEXAMITE M021200**

PET and rPET are used in products such as bottles and polyester textiles. One of our additives for PET and rPET is NEXAMITE M021200, which upgrades the recycled plastic and gives it improved properties without the need to blend in virgin material.



# Nexam at Compound World Expo and Plastic Recycling World Expo

Between the 29th – 30th of September, Compound World Expo and Plastic Recycling World Expo were arranged in Messe Essen, Germany. On site was Nexam, together with over 200 exhibitors.

“It is a highly relevant place for us to be, where a lot of our current and potential customers attended, together with our collaborators”, Henrik Bernquist, Business Development Manager at Nexam, explains.

“We met with several companies who were interested in our products, which has resulted in numerous exciting follow-up meetings being booked for the upcoming weeks.”

The fairs were arranged for the second time by Applied Market Information (AMI), and were combined with two other exhibitions: Plastic Extrusion World Expo and Polymer Testing World Expo. All sorts of actors from the plastic industry were among the attendants, such as recyclers, machine manufacturers, compounders, and converters.

Alongside the exhibitions, seminars and panel discussions were held. Much of the focus was on plastic recycling and the recycled material. Henrik explains that the interest in recycling is partly driven by European laws.

“According to the new framework, all bottles inside the EU must contain 25 percent of recycled plastic till 2025. In turn, this puts pressure on bottle grade rPet, and some argue it will be a scarce commodity if

no other alternative is introduced to the market. We could be a part of the solution with our products in Reactive Recycling”, says Henrik.

The reasons behind Nexam's participation were to gain new insights in both customers and markets, as well as finding new contacts and working to increase the knowledge of the brand.

“Issues closely related to our platforms were discussed at the fair. We met with several companies who were interested in our products, which has resulted in numerous exciting follow-up meetings being booked for the upcoming weeks”, says Henrik.

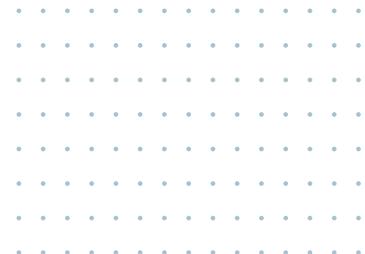
At the next exhibition – which is scheduled to the summer of 2023 – Henrik thinks it's plausible that Nexam attends again.



# Great Response at Plastteknik Nordic

On 1-2 December, the leading Nordic trade fair for the plastic and rubber industry was held at Malmömässan. Nexam participated as an exhibitor with the aim to show the market our platforms in recycling for plastic processing companies and recyclers.

# “...Reactive Recycling brand generated a lot of interest and a very good response.”



After a long period during which the pandemic has put a stop to trade fairs, Nexam Chemical was finally able to exhibit at Plastteknik Nordic in Malmö on 1 and 2 December. Making contacts and meeting customers was at the top on our agenda.

“It was fantastic to get the chance to meet current and potential customers and the rest of the plastics technology industry in person. Also, the right people in the industry were present and many showed

interest in us and our solutions,” says Tomas Eriksson, CCO at Nexam Chemical.

Our focus was on introducing Reactive Recycling to potential customers, industry, and trade show attendees.

“Those working in plastic recycling are familiar with both mechanical and chemical recycling. Introducing a brand-new solution under our Reactive Recycling brand generated a lot of interest and a very good response,” says Tomas.





## Nexam at Interplas UK

On September 28-30, Nexam visited the Interplas exhibition in Birmingham, UK. According to Boyd Cushing, Business Development Consultant at Nexam UK, the Reactive Recycling product portfolio was the one that attracted the most interest. “It is clear that Reactive Recycling is adding value to the market by solving challenges for multiple stakeholders throughout the value chain,” says Boyd Cushing.

Interplas is one of UK’s most prominent events for the plastics industry. Every year all the major players in the industry gather in Birmingham. Nexam’s main objective was to make new contacts and gain valuable market insights.

“It’s a great opportunity to meet market players and pressure test our offer in conversations with potential customers and partners. In addition, it is a rally point for gaining new knowledge and insights,” says Boyd.

### Focus on Recycling

One of the main themes of the show was sustainability, and as such, Reactive Recycling was the part of Nexam’s offering that was naturally highlighted in conversations and meetings. A number of interesting new contacts were made here.

“We have a very interesting offer in the transition to a circular manufacturing system, which makes us an interesting player in the market. All in all, the exhibition reinforced our conviction that we are on the right track with the platforms we currently have,” concludes Boyd.

## COMPANY NEWS

# New Composite for Use in Extreme Environments

In collaboration with [National Composites Centre \(NCC\)](#), Nexam presents the results of a three-year research programme. The project has resulted in a composite that can withstand extremely high temperatures, making it applicable to new areas of the aerospace and automotive industries.

Alongside NCC, Nexam has tested and developed composites that can be applied in extreme environments. Now the result has been presented in the form of an advanced composite that can withstand extreme temperatures.

“Produced with our technology, the new composite is ground-breaking for the industry. It can be applied to areas that were previously difficult to work with,” says Boyd Cushing, Business Development Consultant at Nexam UK and Ireland.

## Developed With Nexam Technology

Throughout the research project, the team used [NEXIMID®](#), which allows the material to withstand extremely hot temperatures of up to 400 °C, making it the most heat-resistant product on the market.

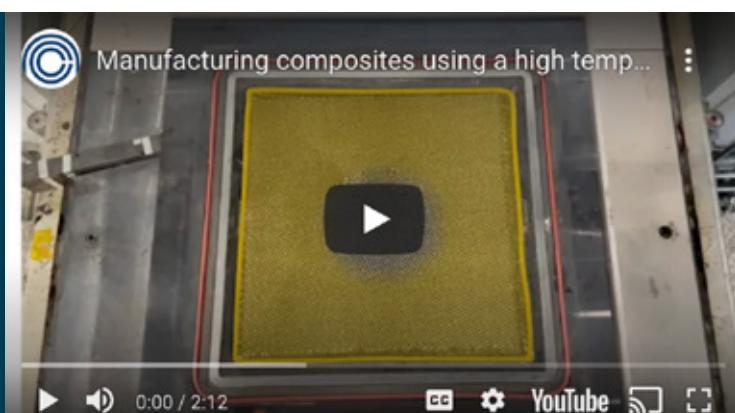
Whilst resin transfer moulding is usually carried out around a temperature of about 120 °C, NCC has been able to work at temperatures above 250 °C thanks to [NEXIMID®](#). This has led to a final product that can withstand very high temperatures.

The result enables industrial players to take advantage of the properties that composites possess, even in high-heat environments, such as in motors in the aerospace and automotive industry.

“We are delighted that our collaboration with NCC has resulted in an innovative breakthrough for the industry. We now look forward to establishing collaborations with industrial operators who have use for the composite,” concludes Boyd.

Watch the video for an in-depth look at the process:

<https://www.nccuk.com/news/ncc-and-nexam-chemical-provide-solution-for-using-composites-in-extreme-temperatures/>





# REACTIVE RECYCLING

By Nexam Chemical

REACTIVE RECYCLING

# Commercial Launch for Reactive Recycling

The Reactive Recycling concept of cost and energy-efficient plastic recycling solutions has attracted global attention. Now Nexam has received its first commercial order.

“The greatest value in this order is that it confirms that the concept works and that this could become a growing business over a long period of time,” says Johan Arvidsson, CEO of Nexam Chemical.

The first commercial order for Reactive Recycling comes from a customer in the UK who uses a recycled plastic stream. The order is an early indication that Reactive Recycling really works, facilitating work on larger volumes where the final product consists of 100 per cent high quality recycled plastic.

The transaction corresponds to a value of approximately SEK 2 million per year. Johan Arvidsson describes the commercial order as the

start of a globally growing business, where the greatest value is the proof that Reactive Recycling is a great investment.

As global annual plastic production has doubled in the last 15 years and demands for recycled materials increase, more and more players are demanding cost and energy-efficient solutions. Reactive Recycling is a concept that meets needs as well as demand. In the future, Nexam expects to reach even more customers in the market.

PORTRAIT

# Meet Jörgen Heby: New Chief Production Officer

Starting in October 2021, Jörgen Heby is Nexam Chemicals new Chief Production Officer. Jörgen comes from the large Finnish chemical concern Kemira. He now looks forward being one of the cogs in the wheel that guarantees continued expansion for Nexam.

– I look forward to being part of a growth company and to work in an innovative and flexible environment where I can take part of the strategic decisions to build a long-term business, says Jörgen Heby.

## Could you summarize your career before you started working at Nexam?

– After three years at a research lab I started at Kemira Chemical in Helsingborg. I worked at Kemira for 14 years, at first with different engineering jobs, then as chief of the factory and product chief. My last employment at the company was as site-service chief in Helsingborg. It meant a responsibility over all functions regarding the production, for example IT, maintenance, energy, and logistics.

## How come you started working at Nexam?

– After working as site-service chief for a couple of years I felt done with Kemira. I was looking for new challenges and felt that I had grown out of my role in Helsingborg. The flexibility, together with the possibility of being able to influence the direction of a company, was the main reason I

accepted the offer of becoming Nexam's new Chief Production Officer. I look forward to work in an innovative environment and to be able to influence the strategical development of the company.

## What does your role as Chief Production Officer mean?

– The role as Chief Production Officers comes with a responsibility over all the production in the company, both in Sweden as well as in Scotland, Hungary, and Poland. It means that I will guarantee a structure of operations that will favor the continued growth of Nexam and that will result in an optimal production solution for the business.

## In what ways do you believe that you can contribute to the company?

– I believe that I can contribute on several levels. With my experience from Kemira, I can contribute with competence regarding production

and personnel management, but also with stability and structure in the production. Above all, I will be able to help the company on a strategical level to ensure that we have everything in place for us to scale up as the production grows.

## What are you looking forward to the most?

– What I am looking forward to the most is to be part of the journey towards further growth. I am looking forward to being a part of, and influence, the direction of a dynamic company on the growth market. I see a big potential in the company, Nexam is growing towards becoming a big player on the international market, a well-known Swedish chemical concern with a global presence. We have come a long way and my work, together with the team, is an important key to reaching all the way forward. It makes it feel very fun to be on Nexam!



PORTRAIT

# Attracting the workforce of the future

Nexam has employees from all over the world. Researchers and innovators gather in Lomma, Sweden, as well as in St Andrews, Scotland, to contribute to making plastic a material of the future.

“I came to Nexam to help create a better future. That’s what we do. We develop products for the market of the future,” says Rodrigo Gouy.

# “It’s rewarding to work with colleagues from so many different cultures.”

Many of us want a meaningful job, where we have the opportunity to contribute to the positive development of society. It’s clear that this was the driving force that brought Brazilian Rodrigo Gouy with a PhD in Chemistry, to settle down in Scotland to work for Nexam.

“Nexam is an exciting company where I get to work every day with developing products that influence the market. Our platforms can make a real difference, and that’s what inspires people from all over the world to come here,” says Rodrigo.

Rodrigo Gouy has a PhD in Organic Synthesis- and Medicinal Chemistry and is a part of Nexam’s research and development team. He spends his days at the production facility in St Andrews, where first class technology is used to develop additives that change the properties of plastics. Purposes range between creating high-tech

composites that can withstand extreme stress and heat, to enabling and simplifying the recycling of different types of plastics.

“Plastics are everywhere and are an essential material for human life. Imagine what the healthcare sector would look like if we didn’t use plastics. How would we be able to ensure a secure food supply without it? The key is to ensure that the plastics produced are of high quality, durable, and have the right properties to perform the intended task. The next step is to enable circular flows of material. We are working on both these fronts, which makes my work very varied, but above all, incredibly meaningful,” says Rodrigo.

Rodrigo also believes that there are great benefits to working at an innovative growth company. There is a strong culture of research and innovation that has been with the company from the start,

which is evident in the working environment and the approach to product development.

“In order to influence the industry and contribute to positive change, innovations must be commercialized and brought to market. We are constantly working closely with our customers and other stakeholders in the development process, which ensures that our products are relevant to the market from the very start,” explains Rodrigo.

Although Rodrigo is based in Scotland, there are only a handful of colleagues that come from the UK, with others coming from Spain, Sweden, Hungary, Poland, Russia, Italy, and Korea.

“It’s rewarding to work with colleagues from so many different cultures. It’s also an advantage because our customers and partners are located all over the world,” Rodrigo concludes.

# Calendar

# 2022

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<b>01/26/2022</b>	Year End-report 2021
<b>04/21/2022</b>	Interim Report January-March 2022
<b>05/11/2022</b>	Annual General Meeting 2022
<b>07/14/2022</b>	Interim Report January-June 2022
<b>10/20/2022</b>	Interim Report January-September 2022
<b>01/26/2023</b>	Year-End-Report 2022