

PRISMA

The WILD Group magazine

Issue no. 3 • 2017



SMART TEAMWORK LEADS TO OUTSTANDING PERFORMANCE

▼WILD

▼PHOTONIC

A cup of DNA please!

WILD builds nanoparticle sensors for AVL.

Photonic enters the promising market of photobiomodulation.

**DI Helmut Wurm**

Managing Director
WILD Technologies

FLEXIBLE STAFF ASSIGNMENTS NEED STABLE PROCESSES.

The best possible development and manufacturing competence at all Austrian sites and an equally professional, yet cost-efficient assembly at WILD Technologies in Slovakia: through collaboration across its different sites, the WILD Group is capable of meeting state-of-the-art requirements regarding the complexity of products and technologies and optimising costs and time in the process. Our best-qualified staff, who are trained in numerous different devices and assemblies, are fully committed to this concept. Their flexible assignment requires that the production processes are stable and consistent throughout all of the Group's sites. This is guaranteed by a number of different tools within the WILD Group, ranging from a structured transfer process to the implementation of valid processes at other sites and the alignment of software and IT. Existing knowledge is transferred within the Group on a 1:1 basis.

To find out why startup Briefcase Biotec relies on the WILD Group's extensive manufacturing knowledge for its „Nespresso machine for DNA synthesis“ just as particle measurement technology market leader AVL does for its nanoparticle sensor, go to pages 3 and 6. We also glimpse into the future with Photonic, which is making the most of its expertise in medical and optical technologies to gain a foothold in the future market of photobiomodulation.

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↗ START-UPS

THE NESPRESSO MACHINE OF DNA SYNTHESIS

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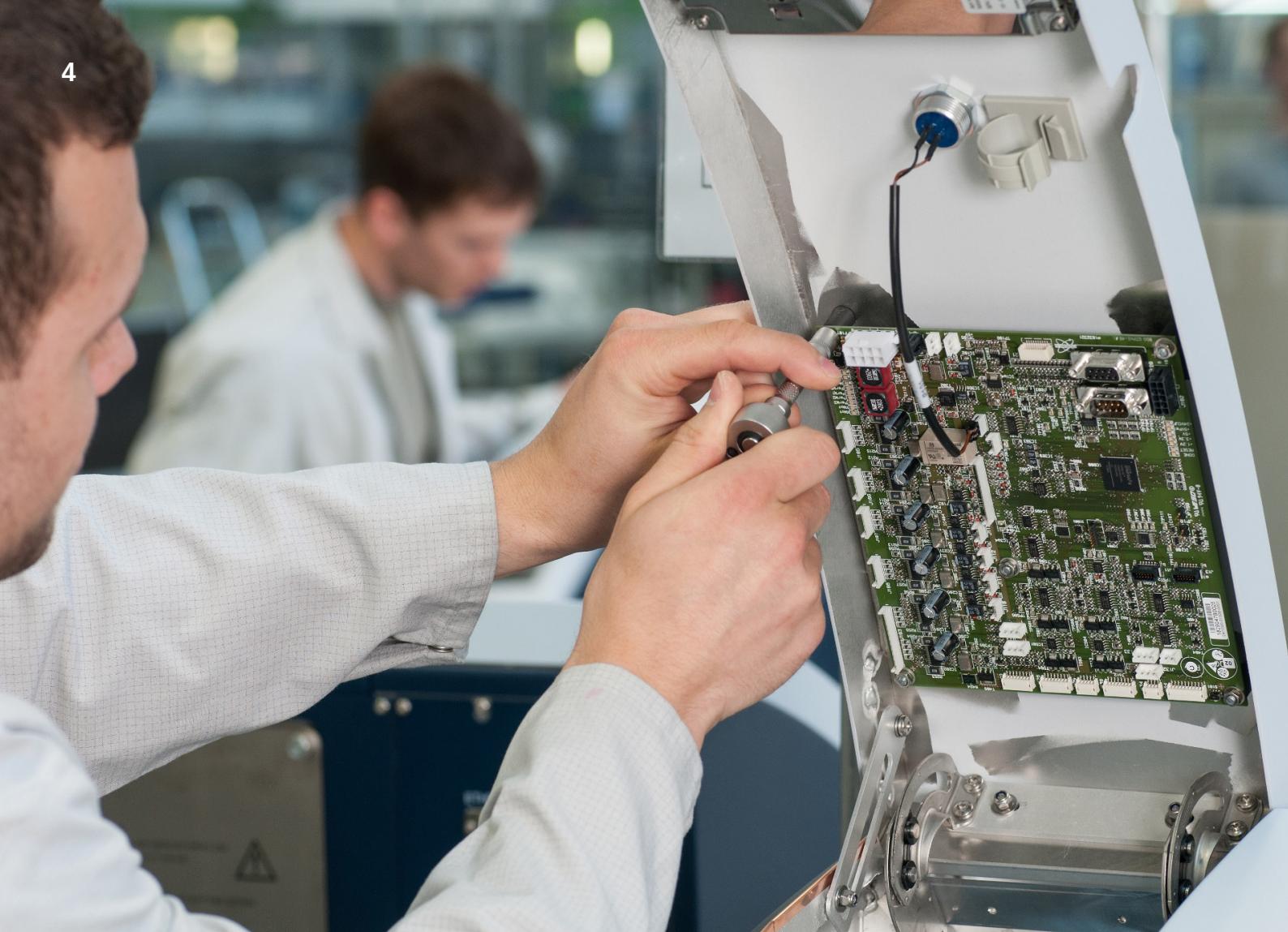
Making DNA is now as easy as making an espresso. KiloBaser produces artificial DNA at the push of a button. The first prototypes are now being built in collaboration with WILD.

DNA is the rope ladder of life. It contains the entire genetic information of a cell. Its decoding has generated an explosion in new procedures and methods. After all, those who break the code can intervene in the control processes of living cells. In Austria alone, some 200 laboratories are currently engaged in genetic research. Their „tool“ is artificial DNA, which they procure from a few specialised companies. This process is costly and time-consuming. As yet, because IT expert Bernhard Tittelbach and molecular biologists Martin Jost and Alexander Murer have now developed KiloBaser, a completely novel laboratory device that renders the production of artificial DNA quick, inexpensive and simple. „The KiloBaser is like a Nespresso machine for DNA synthesis. You type the base combination into the computer and press Enter, but instead of coffee, a drop of DNA with the desired sequence comes out“, explains Alexander Murer, CEO of Briefcase Biotec. This allows for localised production of small DNA pieces in the laboratory within just a few hours. At the heart of this system lies an innovative plastic chip technology that acts as a reaction vessel for the synthesis. The package comes with a cartridge containing all the necessary chemicals. So, for the first time, this device combines modern microfluidics with a new cartridge technology.

Rapid prototyper for DNA

„This quick DNA synthesis can dramatically accelerate research work into new medication, treatments and other gene engineering products such as aromatic substances or enzymes“, Murer assures. The system is currently in the prototype stage. Since late 2016, Briefcase Biotec has relied on the support of WILD and its in-depth expertise in the area of in-vitro diagnostics. „We can actively support the customers in everything ranging from co-engineering to transition to serial production, ensuring a quick launch of the KiloBaser onto the market“, WILD Business Developer Wolfgang Stiegmaier explains. In joint workshops, the two companies are currently working on the implementation of the prototypes in terms of technology application and economic manufacturability. The next step will be the production of pre-series units.

„As a startup company, time and quality are decisive criteria for us. Therefore, we are grateful to be able to draw on the production and development capacities of WILD. Short paths, an understanding for top-level quality and eye-to-eye communication are absolutely essential for us. In this respect, WILD is the ideal partner for us“, Alexander Murer points out.



↗ PRODUCTION

INSTINCT IS KEY.

▼WILD ▼PHOTONIC

Outstanding performance in manufacturing is only possible when humans, technology and process landscape are in perfect harmony. At WILD, you also get a benchmark in costs, lead time, alternative procurement channels and warehouse logistics.

From mechanical manufacturing of precision parts to galvanic surface processing and assembly of optomechanical components and systems in cleanroom and sterile conditions: the multitude of manufacturing competencies running like powerful lifelines through production at WILD is unique. As with every organism, however, you need systems that ensure this „blood circulation“ maintains its rhythm and, at the same time, covers all manufacturing areas like a protective shield. In the case of the WILD Group, these involve proven processes across the entire Group such as SCM, „Smart Production“, a sophisticated quality management system and ongoing CIPs.

All of these processes are based on FMEAs that translate into clear, documented procedures and are integrated in the training of WILD’s employees. „These tools are divided into the areas of system FMEA, construction FMEA and process FMEA, allowing them to be applied very efficiently“, emphasizes Wolfgang Pischounig, who is in charge of transfer management at WILD. In line with its „Smart Production“ concept, WILD also maintains a clear, clean, and waste-free systems environment. Moreover, specially-developed project management software optimises the delivery of products and specifies the ideal process flow for outsourcing projects.



WILD takes process leadership upon customer request

In the case of relocation, the customer can lean back and withdraw from the active handling of all these processes, fully relying on the expertise of WILD, since the systems partner takes on the complete process responsibility after agreeing on the milestones with the customer. „We take out the complexity for the customers so that they can fully focus on their tasks, such as market introduction of new products and new growth”, stresses Wolfgang Warum, Managing Director of WILD Electronics in Wernberg. „Our partnership communication policy and our structured processes quickly dissolve any initial fears of rollout difficulties or know-how loss.” This process landscape runs like a thread through all of the WILD Group’s production sites. „WILD Technologies in particular is interesting for many of our customers because it combines Austrian processes with Slovakian wage costs”, WILD CEO Dr. Josef Hackl argues. Customers can outsource across the entire product life cycle: from development status to serial production.

Roadmaps and WIN network deliver new findings

The mechanical manufacturing of precision parts continues to be a very difficult task and requires a great deal of instinct and utmost care. Even a thousand manual steps are often not enough to put together the numerous individual parts of an optomechatronic assembly. To guarantee top precision and constantly maintain factors like cleanliness, quality and productivity at a state-of-the-art level, it is also

necessary to integrate the results from the Technology and Service Roadmaps and the WIN network directly into manufacturing and assembly. „One of our great strengths are our closed cleanliness and sterile process, in which we properly cater for the products throughout the entire value chain of manufacturing and assembly to guarantee the highest level of cleanliness in terms of organic, film, and particle-related purity”, explains Josef Hackl.

„Our employees are proud to finally see the thoroughly tested products, which often reach the limits of what is technically feasible”, says the WILD CEO. They identify themselves with what they do and have a great understanding for the customers’ wishes and needs. „Though agreements are signed between companies, the decisive factor for the success of a project is the cooperation between the people behind it”, Wolfgang Warum assures.

Examples for WILD Group’s manufacturing and assembly competencies

- Mechanical manufacturing of precision parts
- Mechanically manufactured and injection mould plastic parts
- Galvanic surface processing (anodising, hard-anodising, chemical nickel plating)
- Painting
- Assembly of optomechatronic components and systems
- Assembly of cleanroom and sterile products.

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➤ PRODUCTION

DETECTING INVISIBLE DANGERS.

▼WILD

A team of researchers from AVL and CTR has developed a high-precision optical sensor that can detect nanoparticles smaller than 0.2 micrometres. The optical and laser modules of the sensor are made by WILD

The smaller dust particles are, the more harmful they are for human beings. Therefore, reducing exposure to fine particles is a top priority, not only for automobile manufacturers. The only problem is that ultra-fine particles, i.e. those with a diameter of only two ten-thousandths of a millimetre or smaller are very difficult to detect.

After several years of research, AVL List GmbH, a market leader in particle measurement technology for emission applications, has launched a new, high-precision sensor named „AVL CPC“ which is capable of detecting and quantifying precisely these ultra-fine particles in car emissions faster and more precisely than previously possible.

Together with Carinthian Tech Research (CTR), AVL has adapted the principle of a condensation particle counter specifically for application in emissions. The emissions of highly supercharged engines contain nanoparticles that cannot be detected visually. To make these visible and thus measurable, the new system conducts them into a type of fog chamber. The air in this chamber is supersaturated with a solvent that begins to condense around the particles. The particle is thus transformed into a slightly larger droplet that can be detected.

„Our task was to develop an optical concept which can be manufactured in a stable manner for already existing prototypes and meets the tight tolerances in signal generation, even under serial production conditions. In order to achieve that, we had to apply reverse engineering to redesign the laser module and adapt it to our possibilities, e.g. alignment turning. We also had to create the necessary measuring environment for that“, explains Stefan Werkl, Head of Optical Technology Division at WILD. The customers were looking for a wide range of knowledge and special skills including optics expertise, optomechanical design, tolerance analyses in optics and mechanics, gluing technology, surface engineering, as well as miniaturisation in optomechatronics.

This innovative nanoparticle sensor has been available on the market since September 2016. It is used both in automobile development and in emissions certification for new vehicle registrations.

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↗ INTERNAL

THE STRATEGIST.

▼ WILD

Dr. Christian Rabitsch is the latest addition to WILD Group's Strategy & Corporate Development team.



„What playing field do we want to compete on in the long term and which rules do we want to play by? And how do we position ourselves in order to win the game?“ asks Christian Rabitsch, ably summing up the two areas “Strategy and Organisation Development”, for which the Management of the WILD Group has decided to bring him on board. Rabitsch recalls how he was tempted by the possibility of actively participating in the future positioning of the WILD Group, which he knows well from his time as sales project manager in Optical Technology. „Meanwhile, the company has reached a size that requires for these topics to be coordinated across the entire group“, says Rabitsch, who has a degree in mechanical and industrial

engineering and until recently was involved in research with a focus on „agile operations“ at the Institute for Innovation and Industry Management of the Technical University of Graz.

Implementing agility into WILD’s corporate processes in order to react more quickly to changing customer requirements is therefore at the top of his agenda. This also includes a further expansion of the WILD Integrated Network. As Rabitsch explains his field of activities, „my task is to promote communication within the network and with potential partners, to define the rules of the game and to actively exploit opportunities presented by partnerships or participations“.

↗ INTERNAL

THE CREATOR.

▼ WILD

Since March 2017, Franz Rittmannsberger has been in charge of coordinating the development of medical technology products at the Völkermarkt site.

„Working on the right things at the right time“ is the seemingly simple recipe for success for Franz Rittmannsberger, the new Head of Development at Medical Technology in Völkermarkt. Rittmannsberger, who holds a degree in plastics engineering, has valuable expert knowledge on state-of-the-art technologies and insight into the regulatory procedures involved in medical technology. „For the development of product innovations in medical technology, however, you also need to be well connected with other cooperation partners“, Rittmannsberger admits. In order to get the best possible results, Rittmannsberger thus relies on Value Engineering in collaboration with Purchasing, SCM and Production. He is currently working on a device for the fully-automatic control of serial equipment for an optical measurement system built by a renowned medical tech-

nology group. „The system contains complex optics with various different requirements regarding component coating. Since a practical control of these components is not possible at receipt of goods, we are developing a system for the fully-automatic and complete control of the device which also guarantees both the documentation of measurement data in accordance with the regulations and the necessary traceability“, Rittmannsberger reveals.



↗ DEVELOPMENT

ENTRY INTO THE PHOTOBIMODULATION BUSINESS.

▼PHOTONIC

Photonic is using its expertise in medical and optical technologies to gain a foothold in the future market of photobiomodulation.

It is no secret that light plays an important role in the fight against cancer today. Photodynamic therapy (PDT) is successfully used to treat skin cancer or other tumours in places which are difficult to access. This method, which is based on the combination of physical and chemical principles, allows for precise destruction of cancer cells while leaving healthy tissue unscathed. „PDT has a great potential in controlling antibiotic-resistant germs. This relates both to the elimination of germs in wounds and to the disinfection of surfaces in health centres, industrial installations and production sites“, explains Joachim Enengl, Business Developer at Photonic. The second large market of the future is phototherapy, where light can achieve its effects without adjuvants. „Such treatments are applied in inflammation-based diseases. These can range from Alzheimer's to toothache“, says Enengl. Since the beginning

of this year, Photonic has been focusing on these two areas, combined under the term „photobiomodulation“. „We will expand the already existing diversity of lighting systems to include applications in which light has a biophysical effect on organisms“, Enengl reveals. Photonic is currently looking for partners for cooperative development projects in specific areas. The first functional samples are already being manufactured, e.g. for the sterilisation of multi-resistant bacteria. One of the company's potential in-house developments also touches upon the issue of neonatal jaundice.

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Imprint

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Edited by: Pressestelle WILD, Andrea Patterer & Sabine Salcher
Layout & graphic design: STERNENKLAR GMBH
Photos: WILD, Briefcase Biotec, Thinkstock

The WILD Group

The WILD Group comprises the WILD brands based in Völkermarkt, Wernberg (Austria) and Trnava (Slovakia), and the Vienna-based Photonic. We are your reliable partner on a path of continuous growth. We generate an annual group turnover of 95 million euros with a staff of 400 highly qualified workers and employees.