

PRESS RELEASE

SurFunction and Noxon Automation agree on strategic partnership

Saarbrücken-based company to create new surfaces with laser technology, joint marketing of xDLIP technology in the field of connectors - unique advantages, environmental contributions, and new product generations.

Saarbrücken, October 28, 2021 - SurFunction GmbH, a leading system provider for contactless surface functionalization, has agreed on a global strategic partnership with Noxon Automation. The aim is to use laser technologies to create new surfaces modeled from nature. The collaboration includes the marketing and professional integration into industrial production processes of xDLIP (Extended Direct Laser Interference Patterning) technologies in the field of plug-in contacts. The mature technology, which has now also been validated in operational practice, allows new generations and product concepts of electrical connector systems, which are characterized by a significant friction reduction of up to 40 percent, considerable resource savings and additional property improvements. Promising discussions are underway with potential customers. SurFunction is a spin-off from the Steinbeis Research Center Material Engineering Center Saarland (MECS).

Dr. Dominik Britz, managing partner of SurFunction GmbH: "In recent months, considerable progress has been made regarding immediate industrial implementation. Thus, previous possibilities of laser interferometry processes have been significantly expanded by a new generation of more powerful and compact optics, considerable process optimizations as well as complementary processes. This market-ready technology platform, which we call xDLIP, can now be optimally



implemented together with Noxon in a modular approach for the series-production of electrical connectors."

Frank Bauer, managing partner of Noxon Automation GmbH & Co. KG: "SurFunction is the technology leader in the field of laser-structured surface modification for connectors. The many years of experience and the overarching competencies of Noxon are ideal complements. We are very pleased about our joint strategic partnership and are convinced that we can offer the market a new dimension of innovation potential with our joint system approach."

Ralf Zastrau, shareholder and co-managing director of SurFunction GmbH adds, "With xDLIP technology now available for industry, revolutionary cross-scale structures with precision in the nanometer range, modeled from nature, are opened up in a broad spectrum. In addition, immediate integration into existing production processes and high-performance surface functionalization in record time is a given. We are convinced that we will be able to provide our customers with more innovative, resource-saving and higher-performance product generations in the future."

SurFunction on Twitter: <http://twitter.com/SurFunction>

SurFunction on LinkedIn:

<https://www.linkedin.com/company/surfunction-gmbh/>

For further inquiries, please contact:

Nadja Schorr
SurFunction GmbH
Tel. +49/(0)681-30270540
info@surfunction.com

SurFunction GmbH
Campus A1.1
D-66123 Saarbrücken
www.surfunction.com

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SurFunction GmbH (www.surfunction.com):

SurFunction is a leading system provider for contactless surface modification. The company, based in Saarbrücken (Saarland), uses various laser-based processes based on award-winning and patented interference technologies (xDLIP). This makes it possible to create cost-effective, cross-scale surface structures in record time, which are modeled from living nature. Surfaces can thus be equipped with new properties (e.g. non-stick, antibacterial, energy-efficient, low-friction, highly electrically conductive or tamper-proof). True to the claim "Nature knows best", SurFunction opens up new innovation potential and provides companies from numerous industries with significant competitive advantages. SurFunction provides customers with complete systems as well as highly functional surfaces. SurFunction wants to improve the products or processes of its customers and conserve resources. SurFunction cooperates closely with leading research institutions worldwide, has first-class references as well as comprehensive competency - based on years of experience and development. SurFunction is a spin-off from the Steinbeis Research Center Material Engineering Center Saarland (MECS).

NOXON Automation (noxon-automation.com):

NOXON Automation looks back on a success story of more than 50 years and pursues the claim to shape the future with innovative technology, to show new solutions and to develop new products. The company is one of the leading international suppliers in the development and manufacture of complex winding and unwinding machines with a high degree of automation, coil storage systems, coil welding devices and packaging machines. Individually designed special solutions complete the range of products and services for stamping and forming technology. The fulfillment of complex customer requirements, high delivery reliability and maximum customer satisfaction are ensured by an orientation for innovation and many years of expertise from specialists. Noxon's customers include almost all well-known companies from the connector industry, automotive industry, telecommunications industry and industrial electronics.

Background: xDLIP

Surface structures on almost any component have a significant impact on their performance. The research that has been carried out for decades has proven the almost infinite variety of possibilities. If particularly successful surfaces of nature are analyzed in this context, it can be determined that almost all effective structures (e.g. creation of non-stick properties of the lotus plant or color effects on butterfly wings) depend on complex geometries in tiny orders of magnitude. So far there has been no technology that enables industrial use economically and at relevant process speeds.



The researchers and co-founders of SurFunction, Prof. Dr.-Ing. Frank Mücklich and Prof. Dr.-Ing. Andrés Lasagni, have been working on a solution to this problem for more than twenty years and are the inventors of "Direct Laser Interference Patterning". Due to its simple functional principle, this technology holds the key to creating artificial surfaces inspired by nature. For example, by splitting and superimposing laser beams, structures of the relevant order of magnitude can be generated through "interference". The phenomenon is symbolically comparable to the interaction of colliding water waves. If a crest of the first wave meets a crest of the overlapping second wave, the resulting wave reinforces the other. By using this principle professionally and supplementing it with accompanying technologies, successful industrial use can now be achieved. This new cross-sectional technology is summarized under the term xDLIP (extended Direct Laser Interference Patterning).