



**France as Partner Country 2011**

France will be the official Partner Country at HANNOVER MESSE 2011 with a showcase themed "Innovation for Sustainable Growth." France ranks alongside Germany as one of Europe's leading industrial countries. In 2009, Germany was France's biggest trading partner with around 114 billion euros in trade. Dr. Wolfram von Fritsch, Chairman of the Deutsche Messe Board of Management: "With France as Partner Country we have a strong ally indeed." For the industries that exhibit at HANNOVER MESSE, France is one of the most important sales, investment and cooperation destinations worldwide. The supporting program for France's HANNOVER MESSE 2011 showcase will provide answers to burning questions and facilitate direct dialogue with the country's captains of industry and science elite.

### Early-bird discount for smart exhibitors – Get in quick!

Smart exhibitors have been taking advantage of it for years: HANNOVER MESSE's early-bird discount. All companies and associations that register by **15 September 2010** will benefit from our early-bird special and get first choice of display sites. **Our special offer is only a few mouse clicks away. Simply register your own custom stand or one of Deutsche Messe's rental stand systems (fair package) online.** At [obs.messe.de](http://obs.messe.de), you can access all Deutsche Messe services via our convenient, easy-to-use Online Business System (OBS). Exhibitors with limited budgets have the option of participating in numerous quality group displays, such as the IVAM Product Market, the SchauPlatz NANO and WON (Word of Nano) pavilions, and the NC Society (NCG) display.

For further information, visit [obs.messe.de](http://obs.messe.de)

## MicroNanoTec: the big league of all things tiny

2011 will see the full range of innovative micro, nano and laser technologies showcased alongside the other 12 trade fairs at HANNOVER MESSE

### 13 industry sectors under one roof:

**maximum synergies for exhibitors and visitors**  
MicroNanoTec at HANNOVER MESSE 2011 is the world's leading dedicated showcase for the full range of applied micro and nano technologies and laser machining systems, offering maximum contact opportunities with a diverse set of industries. It is a must-see event for any industry professional wanting to find out what's hot in the markets of tomorrow. MicroNanoTec's outstanding success is due to its large audience of high-caliber visitors, who have come to value the convenient access to a rich array of information plus the myriad other synergies derived from the show's close proximity to the 12 other flagship fairs at HANNOVER MESSE. In 2010, a total of 46,000 trade professionals came to Hannover with a specific interest in state-of-the-art micro, nano and laser technologies.

### Nearly 70 percent of visitors are already planning their return in 2011

Survey figures reveal that 66.7 percent of visitors at this year's HANNOVER MESSE are already planning to return in 2011. They also show that MicoNanoTec's strong B2B focus paid ample dividends: 92.2 percent of visitors in 2010 were trade professionals. Exhibitors are also planning their MicroNanoTec 2011 showcase well in advance (see also interview on page 2) – and taking advantage of Deutsche Messe's early-bird discount (see box on left).

### High-caliber forums and conferences

MicoNanoTec's Innovations for Industry forum has made a name for itself as the micro and nanotech sector's most important innovations platform. In 2011, it will once again be the place where new trends are set, and where renowned experts, scientists and business representatives discuss topical issues and unveil the latest developments and scientific findings. Other highlights include the IVAM "Micro, Nano, Materials" Product Market, featuring the latest hi-tech applications and the Lasers for Micro-machining and Microproduction display. The latter looks at innovative methods and laser applications for high-precision processing and manufacturing and is aimed at photonics experts as well as users from all industries.



Similarly, the Nano for Industry exhibit will show how nanotechnology can be used to develop new and enhance existing materials and production processes in the renewables sector.

Dietmar Harting, General Partner, HARTING Technology Group, on his plans to return in 2011: "We were delighted by the level of interest shown by trade visitors at this year's show and the in-depth enquiries we received. This convinced us that our time and efforts were well spent and that we should exhibit at MicroNanoTec again in 2011. For us, the fair simply offers an unrivalled opportunity to showcase our microsystems technology to a highly-targeted audience of decision makers."

For further information, visit:

[hannovermesse.de/  
micronanotec\\_e](http://hannovermesse.de/micronanotec_e)

# “Bright ideas alone are not enough!”

This year’s winner of the HERMES AWARD answers 7 questions about why MicroNanoTec is so important to his company

Every year, five market-ready innovations receive the HERMES AWARD at HANNOVER MESSE. In 2010, Dr. Ingo Bretthauer, Board Chairman and CEO of LPKF Laser & Electronics AG, was presented with this internationally-recognized prize for his company’s ground-breaking innovation in the field of laser micromachining. LPKF will exhibit again at next year’s MicroNanoTec fair at HANNOVER MESSE. He explains why in the following Messe News MicroNanoTec interview.

## How did winning the HERMES AWARD affect your innovative laser direct structuring system?

“The HERMES AWARD publicly recognized our LPKF Fusion3D system, which is capable of producing high-quality three-dimensional circuit boards from simple plastic blanks at unprecedented speeds. This represents a major breakthrough, which has effectively opened up this technology for industries worldwide. Our high-performance, cost-effective laser structuring system has met with strong interest – in Germany and abroad – from the scientific community, politicians and, not least, big-name manufacturers. **The HERMES AWARD played a key part in this – because bright ideas alone are not enough. You also have to communicate them to the right people!**”

## Why is MicroNanoTec 2011 important to LPKF Laser & Electronics AG?

“LPKF is noted for its laser micromachining technology. Our success is rooted in our ability to apply our expertise in plant engineering and laser technology and our practical experience in the development of cost-effective, high-quality production systems. Today, you will find LPKF technology in research laboratories as well as in small-, medium- and large-scale production.

**Next year’s MicroNanoTec is a key opportunity to dialogue with industry professionals and other visitors and market our solutions to potential customers.”**

## How important is the fair to your customers?

“LPKF is not the only player in the global market. **The fair allows our customers to directly compare us with competing suppliers – something we actively encourage.** After all, only here will they get a comprehensive overview of the latest research findings and the latest market-ready production solutions – plus direct contact with industry experts.”

## What innovations can we expect from you at MicroNanoTec 2011?

“I can’t comment on that at present, except to say that we will be presenting a new prototyping solution plus one or two new laser systems with some very unique features. For example, thanks to a specially-developed laser source and optimized control systems, our new, recently-launched cutting lasers for printed circuit boards can achieve cutting results that would usually require much more powerful systems. For users this means lower purchasing and maintenance costs coupled with higher productivity and precision. Sounds good, doesn’t it?”

## Was MicroNanoTec 2010 a success for your company?

“**Yes, definitely** – despite the disruptions to Europe’s air traffic at time. We made many new contacts, a number of which culminated in actual sales. **HANNOVER MESSE 2010 was an important catalyst for the growing interest in three-dimensional circuit boards.** More and more manufacturers are now looking to produce this type of technology.”



Dr. Ingo Bretthauer,  
Chairman and CEO,  
LPKF Laser &  
Electronics AG,  
www.lpkf.com

## What are the key trends in your industry at present?

“Purchasing price is becoming less and less of an issue. **First and foremost, customers are interested in quality and total cost of ownership.** Other key decision-making criteria include energy efficiency, space requirements, ease of operation and increased production flexibility. As far as these are concerned, laser processing systems are without equal. We don’t need expensive tools. We can modify layouts directly by computer and change production over to new products in an instant.”

## When will you start preparations for MicroNanoTec 2011?

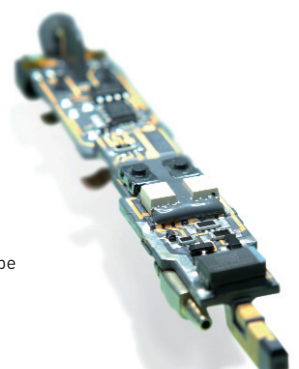
“We have already started. **We plan our trade fair showcases about one year in advance** to ensure they meet the needs of both our business segments and our international representatives. And naturally we are also keen to **take advantage of Deutsche Messe’s attractive early-bird special.**”

LPKF Laser & Electronics AG produces machines and laser systems that are used in electronics manufacturing, the medical equipment sector, the automotive industry and in the production of photovoltaic cells. A specialist in laser micromachining, LPKF is regarded as a global leader in a number of market segments. Its success is based on its ability to effectively combine its expertise in drive, control and laser technology with its plant engineering know-how. The company currently employs more than 400 staff at 14 production and sales sites.



The LPKF Fusion3D turns simple, injection-molded blanks into three-dimensional circuit boards

LPKF’s innovative LDS technology prints conductor tracks on plastic blanks of any shape



## Events calendar filling up quickly

Two important dates for your diary!

The fourth HANNOVER MESSE Autumn Forum on Lasers will be staged on 10 November 2010 at the Fraunhofer Institute for Laser Technology (Fraunhofer ILT) in Aachen. This year's keynote theme will be "Lasers in production processes – New options for the photovoltaics and electric mobility sectors." The invited laser experts from industry and research will be focusing in particular on production technology for energy



storage devices and electric vehicles. The Forum is jointly organized by the Fraunhofer ILT, the Laser Centre Hannover (LZH), LIMO Lissotschenko Mikrooptik GmbH, the Ruhr-University Bochum (Department of Mechanical Engineering and Laser Applications Technology), the IVAM Microtechnology Network and Deutsche Messe.

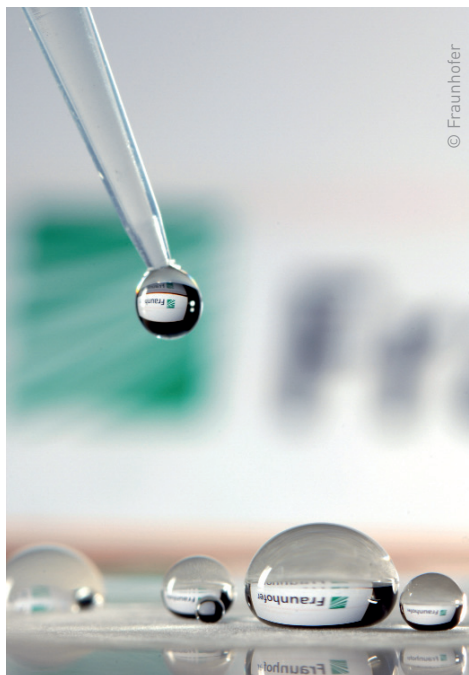
The Autumn Laser Forum provides a sneak preview of the "Lasers for Micromachining and Microproduction" special exhibition that will be staged at the IVAM "Micro, Nano, Materials" Product Market at MicroNanoTec from 4 to 8 April 2011.

The exhibition program and registration forms can be downloaded from [ivam.de](http://ivam.de).

For additional information, contact Alexia Hallermayer (Tel.: +49 231 9742 169, E-mail: [ah@ivam.de](mailto:ah@ivam.de)).

## Shark skin-inspired surface coatings

With energy costs rising and natural resources dwindling, energy efficiency and resource conservation are fast becoming key factors in the design of products and manufacturing processes. The ultimate aim is to consume a minimum of input materials and to make components that deliver maximum functionality while using little or no energy. For instance, to minimize friction losses, industry is increasingly opting for high-strength, hard-wearing materials and surface coatings that optimize gliding and friction properties.



Ultra-short-pulse laser systems featuring pulse durations in the femto- or pico-second range are particularly well suited to micro/nano surface texturing: they offer high machining accuracy – even at nanoscale; they can be used on most materials and they substantially reduce thermal damage.

Surface structures are often modeled on examples from nature, for instance, shark skin, which has microscopic scales that are highly effective at reducing hydrodynamic friction, or sandfish skin, which is extremely effective at reducing friction against solid surfaces. While the artificial reproduction of these types of structures is still in its technological infancy, other areas, such as the surface of the lotus flower, have been thoroughly researched and are already being widely applied to engineering components via laser machining. Here, a combination of micro and nanoscale structures can be used to minimize the wettability of a material, thereby enabling water droplets to roll off, leaving behind a dry, residue-free surface. Functional surfaces that reduce friction and wear are also already widely used in the automotive sector. For instance, lasers are used to introduce micro-pits that act as oil reservoirs on the surfaces of cylinder liners or piston rings.

The extremely broad spectrum of materials that lasers can be used on opens up a wide range of applications. Apart from laser direct structuring (LDS) applications, lasers can also be used to create tools – such as injection molds and stamping molds – that are then able to replicate functional surfaces on a large scale in very short production cycles.

## SchauPlatz NANO line-up greatly extended

SchauPlatz NANO will be back at HANNOVER MESSE 2011 with a much broader and more refined showcase. Together with the exhibiting companies, Deutsche Messe has formulated a clearer thematic structure, based on applications and industry sectors, that will help visitors in their search for the right solutions and partners. Exhibitors, on the other hand, will benefit from the more targeted positioning of their products and services.

But that's not all. The showcase will also feature sector-specific value and production chains and case studies that show in a very tangible way how nanotechnology can be used to add value to products.

As the world's premier technology event, HANNOVER MESSE also provides an ideal platform for start-up and spin-off companies interested in raising their public profile. Its line-up of long-established exhibitors and appeal to specific target groups makes SchauPlatz NANO an excellent springboard for new companies. Its new Start-Up Area will provide them with the perfect setting for showcasing their latest product developments, prototypes and technology concepts. In response to growing demand from industry, services will also feature more prominently – at the new Service-



Point. The ServicePoint was specifically developed to serve as a targeted marketing platform for industry networks and clusters as well as technology parks, technology consultants, patent attorneys and database and content providers. "Services require a different exhibition format from products, which is why we will also be providing presentation islands and meeting areas for the participating companies," explained Ronald Beiersdorff, the initiator of and contact person for SchauPlatz NANO.

With its diverse themes and international orientation, the SchauPlatz NANO display will once again be the focal point of HANNOVER MESSE's applied nanotechnology showcase. The co-location of the Surface Technology and MicroNanoTec fairs in Hall 6 will expose SchauPlatz NANO exhibitors to an even wider audience of trade professionals with specific interests, project ideas and enquiries.

# The secrets of MicroNanoTec's success

Feedback from the satisfied participants at the Micro-Nanotechnologie Thüringen group pavilion:



**Indispensable platform**  
Dr. Knuth Baumgärtel, Executive Board Chairman of the Mikro-Nanotechnologie Thüringen e.V. cluster initiative (photo on left): "Judging from the contacts we made at this year's show and the results to date of our follow-up work, we can already say that MicroNanoTec has become an indispensable marketing platform for us and our peers in this emerging industry. The same applies to users and service

providers. MicroNanoTec also allowed us to forge new contacts and deepen existing ones with a number of allied technology clusters in Germany as well as with foreign-based industry associations."

**Outstanding customer acquisition opportunities**

Dr. Hans-Joachim Freitag, Managing Director, CiS Forschungsinstitut für Mikrosensorik und Photovoltaik GmbH: "MicroNanoTec was an excellent opportunity to acquire new customers from key sectors for our latest microtechnology, microsensor, and microsystems technology solutions."

## Research success stories at World of Nano

Nanotechnology will also feature prominently at Research & Technology, the leading trade fair for research, development and technology transfer, in Hall 2. Here, the primary focus will be on research and case studies that demonstrate how new developments in nanotechnology find their way into new products and applications. The World of Nano pavilion will serve as a concentrated showcase of this up-and-coming technology. Contact for interested research institutions and companies:

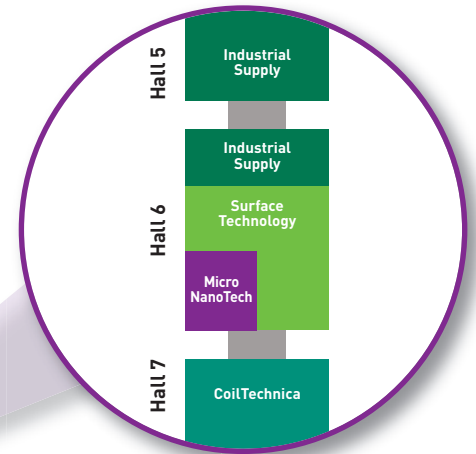
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For further information, visit [worldofnano.net](http://worldofnano.net)

## Map of the exhibition grounds



- **Industrial Automation**  
Leading Trade Fair for Process, Factory and Building Automation Systems and Solutions (Halls 8-9, 11, 14-17)
- **Motion, Drive & Automation**  
Leading Trade Fair for Power Transmission and Control (Halls 15-17, 19-25)
- **Energy**  
Leading Trade Fair for Renewable and Conventional Power Generation, Transmission and Distribution (Halls 11-13, 27, FG)
- **Power Plant Technology**  
Leading Trade Fair for Power Plant Design, Systems, Operation and Maintenance (Hall 27)
- **Wind**  
Leading Trade Fair for Wind Generation Technology, Components and Services (Hall 27)
- **MobiliTec**  
Leading Trade Fair for Hybrid and Electric Powertrain Technologies, Mobile Energy Storage and Alternative Mobility Solutions (Hall 25, FG)
- **Digital Factory**  
Leading Trade Fair for Integrated Processes and IT Solutions (Hall 17)
- **ComVac**  
Leading Trade Fair for Compressed Air and Vacuum Technology (Hall 26)
- **Industrial Supply**  
Leading Trade Fair for Industrial Subcontracting and Lightweight Construction (Halls 3-6)
- **CoilTechnica**  
Leading Trade Fair for Coil Winding, Electric Motor, Generator and Transformer Technology (Hall 7)
- **SurfaceTechnology**  
Leading Trade Fair for Surface Technology (Hall 6)
- **MicroNanoTec**  
Leading Trade Fair for Microtechnology, Nanotechnology and Laser Micro-Materials Processing (Hall 6)
- **Research & Technology**  
Leading Trade Fair for R&D and Technology Transfer (Hall 2)



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