

# SAXONY!

made  
in  
Germany

## COMPANIES FROM SAXONY - A HIGH TECH LOCATION IN GERMANY

NANO TECH TOKYO  
JANUARY 28 – 30, 2015  
EAST HALL 5, L-21

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INFORMATION



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for Economic Affairs, Labour and Transport  
[www.smwa.saxony.de](http://www.smwa.saxony.de)



WIRTSCHAFTSFÖRDERUNG  
SACHSEN

Saxony Economic Development Corporation

[www.wfs.saxony.de](http://www.wfs.saxony.de)



European Union  
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development fund

**Europe funds Saxony!**

# NANOTECHNOLOGY IN SAXONY

With 200 companies specialized in nanotechnology Saxony belongs to Germany's top 5 locations. Saxony is characterized by a tight network of producing industries and suppliers that give impetus to the development and economic use of nanotechnologies and open up new channels. Thus, nanotechnology experts benefit from close exchange with the microelectronics/ICT («Silicon Saxony»), mechanical engineering and automobile industries, which are particularly strong in Saxony. When it comes to nanoanalysis, nanoelectronics, functional nano-layers, ultra-thin layers and materials in particular, Saxony's companies and research institutes are at the top of the European field.

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Saxony's nanotech companies and research institutions have largely organized themselves in various active networks. An excellent example is the Nanotechnology Center of Competence »Ultrathin Functional Films« (Nano-CC-UFF), that unites 51 companies and 32 research facilities. Furthermore nine Fraunhofer Institutes and three faculties of the Dresden University of Technology cluster their competencies within the »Dresden Fraunhofer Cluster Nanoanalysis«.

That's why it's no coincidence that Saxony's capital Dresden is host to the »Nanofair« convention – the most established conference on nanotechnology in Europe and among the premier events worldwide.

# CONTENT

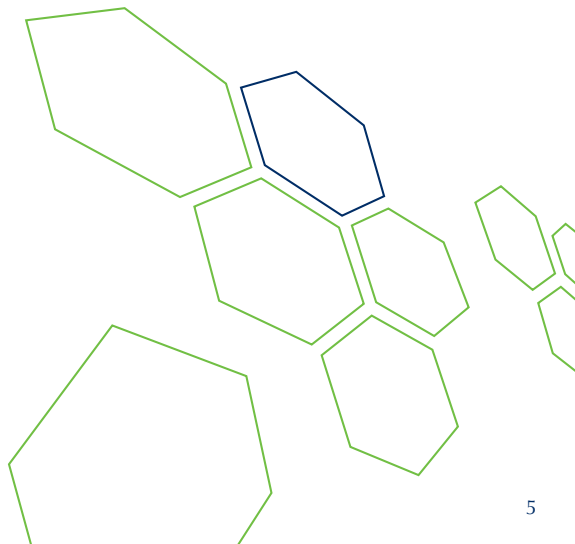
CITY OF DRESDEN .....	6
DTF TECHNOLOGY GmbH .....	6
FHR ANLAGENBAU GmbH .....	7
FRAUNHOFER INSTITUTE for Ceramic Technologies and Systems IKTS .....	7
FRAUNHOFER INSTITUTE for Electronic Nano Systems ENAS .....	8
FRAUNHOFER INSTITUTE for Material and Beam Technology IWS .....	8
LOSER CHEMIE GmbH .....	9
NANOTECHNOLOGY CENTER OF COMPETENCE »Ultrathin functional films« .....	9
SAXONY ECONOMIC DEVELOPMENT CORPORATION .....	10

# SEMINAR ON MAIN THEATER

JANUARY 29, 2015, 1.00-4.45 P.M.

NANO IN SAXONY - ORGANIC ELECTRONICS AND  
NANO MATERIALS FOR ENERGY AND MOBILITY

[www.nanotechexpo.jp/maintheater2015.html](http://www.nanotechexpo.jp/maintheater2015.html)



## CITY OF DRESDEN - Department of Economic Affairs

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Landeshauptstadt  
Dresden

Over the last few years, nanotechnology in Dresden has developed into a high-performing branch of industry with a well-developed research environment. According to a study by the Association of German Engineers, as many as 100 companies, out of 1000 in nanotechnology nationwide, have settled in Dresden, making the region a centre for this sector in Germany. Dresden also plays a leading role internationally: the city's research institutes are at the international forefront and intensive cooperation between researchers in the region sets the course for their results quickly being put to use all over the world.

If you have any questions, we will be glad to help you. Our services include:

- one-step-agency for investments in Dresden
- assistance in finding industrial real estates
- procurement of contacts with regional researchers and companies.

Welcome to Dresden!

## DTF TECHNOLOGY GmbH

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### DTF Technology GmbH – Dresden Thin Film Technology

DTF Technology GmbH develops processes and equipment for thin film deposition and vacuum technologies. The company portfolio includes:

- Tools for CVD and PVD (sputtering, evaporation, PECVD) and atomic layer deposition (ALD)
- Ultra-short time annealing techniques, like Flash Lamp Annealing (FLA) for the thermal treatment / modification of surfaces on temperature sensitive substrates (glas, PET foil, plastic materials)
- Plasma Immersion Ion Implantation (PIII) systems for advanced deposition of materials (e.g. for improved adhesion of protective coatings) and for doping processes (e.g. for microelectronics and for photovoltaics)
- Vacuum handling systems for R&D and industrial environments, e.g. cluster tools, in-line systems or roll coaters

## FHR ANLAGENBAU GmbH

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FHR Anlagenbau GmbH is specialised in the development of innovative thin-film coating technologies and vacuum coating equipment and renders various services in the field of thin-film technology. The major field of business is the construction of coating plants which feature a range of vapour deposition, magnetron sputtering, CVD and ALD technologies for industrial production and research applications. These systems are used in many branches of industry such as nanotechnology, electronics and sensor technology, optics, touchpanel and display industry, photovoltaics, solar thermal plants, and in the automotive sector. The product portfolio includes modular cluster systems for stationary coating of substrates, inline systems with vertical or horizontal substrate transport for coating glass plates or tube surfaces, as well as roll-to-roll plants for coating flexible substrates such as metal strips or polymer films. FHR closely collaborates with renowned research institutions and industry partners world-wide. The company takes a leading market position, in particular in the field of roll-to-roll vacuum coating equipment.

## FRAUNHOFER INSTITUTE FOR CERAMIC TECHNOLOGIES AND SYSTEMS IKTS

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**The Fraunhofer IKTS conducts applications-oriented research in the field of high-performance ceramics.**

As research and technology service provider, Fraunhofer IKTS develops ultramodern high-performance ceramic materials, industrially relevant manufacturing processes, prototype components and systems in complete production lines, through to pilot-scale production. At its heart are market-viable ceramic solutions for mechanical and plant engineering, energy and environmental technology, optics, medical technology as well as electronics and microsystems technology.

The research portfolio is expanded with expertise in materials diagnostics and testing. The test procedures in the fields of acoustics, electromagnetics, optics, microscopy and laser technology contribute substantially to the quality assurance of products and systems.

## FRAUNHOFER INSTITUTE FOR ELECTRONIC NANO SYSTEMS ENAS

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The Fraunhofer Institute for Electronic Nano Systems ENAS focuses on smart systems integration by using micro and nano technologies and provides services in:

- Development, design and test of MEMS and NEMS (micro and nano electro mechanical systems)
- Wafer level packaging of MEMS and NEMS, wafer bonding, low temperature bonding
- Metallization and interconnection systems for micro and nano electronics as well as 3D integration
- Adaptive printing technologies inclusively material development and characterization
- Reliability and security of micro and nano systems.

In Sendai, the Fraunhofer Project Center »NEMS/MEMS Devices and Manufacturing Technologies at Tohoku University« was founded as a platform for common research and development activities of Tohoku University and Fraunhofer ENAS. The project center is run to the benefit of both partners as a vehicle for R&D cooperation, technology transfer as well as training and education programs.

## FRAUNHOFER INSTITUTE FOR MATERIAL AND BEAM TECHNOLOGY IWS

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The Fraunhofer IWS portfolio includes two overlapping working areas: the laser and the surface technology. The R&D work is based on a solid materials science background and extensive technical capabilities for materials and component characterization.

Materials are a central key element of today's manufacturing technology. On the other hand, the field of nanotechnology is increasingly gaining importance in both materials development and manufacturing. The Fraunhofer IWS offer one-stop-solutions usually derived from novel concepts, which are based on the holistic analysis of manufacturing systems, processes, materials and component performance. The IWS continuously expands its facilities, which guarantees an efficient project execution utilizing state-of-the-art and high-tech equipment.



## LOSER CHEMIE GmbH

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LOSER CHEMIE GmbH develops and distributes a range of cutting-edge, environmentally friendly products for multiple industries, including wastewater treatment, textiles, paper, leather, and rare metal recycling. We complement these products with a full line of services, including R&D, piloting, technology transfer, and sustainability management. We are the only active company with an universal recycling procedure for rare metals found in thinfilm-photovoltaic waste (end of life, production waste, overspray), such as indium, gallium, selenium, molybdenum etc. Otherwise we are also active in recycling of Rare Earth Elements, used in e-Mobility, Automotive, Renewables, etc.

LOSER CHEMIE GmbH

- Proven history of successful waste management solutions in Germany for the solar industry
- Certified waste management company

## NANOTECHNOLOGY CENTER OF COMPETENCE

»Ultrathin functional films«

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nanotechnology

CC "Ultrathin functional films"

The Nanotechnology Center of Competence »Ultrathin functional films« was founded in October 1998. The office is situated in the Fraunhofer Institute for Material and Beam Technology IWS in Dresden.

The center of competence joins 51 enterprises, 10 university institutes, 22 research institutes, and 5 associations into a common network. The members have special know how in the field of thin films and coatings. The work of the center of competence focuses on the fields of:

- Advanced CMOS
- New devices
- Biomolecular layers for medical and technological purposes
- Nanoscaled protection layers
- Thin films for optics and photonics
- Nano-size actrics and sensorics; nano-systems.

## SAXONY ECONOMIC DEVELOPMENT CORPORATION

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WIRTSCHAFTSFÖRDERUNG  
SACHSEN

Saxony Economic Development Corporation

The Saxony Economic Development Corporation promotes Saxony as a business location and advises potential investors on relocation projects. Furthermore, the WFS supports Saxony's companies in their export efforts and initiates cooperation with partners outside Saxony.

Our services include:

- the latest data on Saxony's economy and business environment,
- customized business site location services,
- procurement of contacts with regional decision makers,
- information on opportunities for financial support and subsidy programs,
- access to branch networks in Saxony,
- assistance in opening up new markets, and
- in initiating cooperative partnerships.

## CONTACT IN TOKYO

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### »Invest in Saxony« – Saxony's Information Portal for Investors

According to the latest survey conducted by the UK-based consulting firm »GDP Global,« the Saxon investors' portal »Invest in Saxony« is one of the world's best websites for investors. In the recent assessment of investment service agencies, the Saxony Economic Development Corporation (WFS) received top ratings for its communication in the www.



[www.invest-in-saxony.com](http://www.invest-in-saxony.com)

## FURTHER COMPANIES FROM SAXONY

### BUBBLES AND BEYOND GMBH

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# SAXONY!



## Recognize the One from Saxony?

You can never start too early! Saxony has lots of bright and alert professionals. Their educational level is much higher than in most other countries. 96 percent have at least a university entrance qualification or successfully completed their vocational training (OECD average: 77 percent). Mathematics, computer science, natural sciences, and technology are the favorite subjects of Saxony's adolescents. Numerous companies from around the globe – such as Volkswagen, Hitachi, and GLOBALFOUNDRIES, GlaxoSmithKline, Bombardier, or DHL – already benefit from that fact. So come and meet your bright and alert future employees!



WIRTSCHAFTSFÖRDERUNG  
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