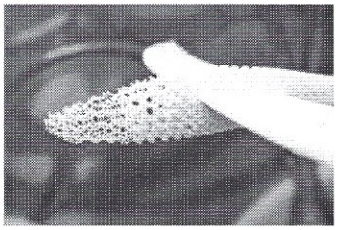
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Research & Technology 7 to 11 April 2014

Bionic

Bionics applies biological methods and systems found in nature to innovative engineering and technology concepts.

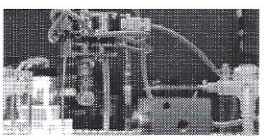


Elastomers are now increasingly being used for parts such as exhaust mountings that are subject to high mechanical stresses. However, micro-cracks that extend beyond a critical length under continuous strain can result in sudden component failure, even below the standard rated load. The OSIRIS project aims to help solve this problem by developing self-healing elastomers. The principle of supplementing an elastomer matrix with self-healing components (additives) is based on an approach used in bionics. Many plants seal their "wounds" with latex, which the plant secretes when it is damaged and which hardens to form a type of band-aid.

The term "bionics" describes the application of biological methods and systems in engineering and technology. The science behind it is inspired by nature and transforms its findings into innovative technology. Researchers have been showcasing their market-ready inventions in this field at HANNOVER MESSE for ten years. The international platform for bionic applications at the leading trade fair Research & Technology is simply called BIONICS. The wide range of key technologies exhibited here includes functional surfaces, optical technologies and product solutions from robotics, communications technology and microsystems technology.

Main display categories:
Featured here are a whole series of solutions in areas such as

- functional surfaces,
- optical technologies,
- communications technology,
- robotics and
- microsystems technology.



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Night of Innovations
Night of Innovations is perfect platform at HANNOVER MESSE, where top people from science, industry and the political arena get together and talk about the relevant issues of the day.

Themed Presentation

Adaptronics
WON - World of Nano
Bionics
Organic Electronics
Textile Solutions
tech transfer - Gateway2Innovation

Participation Options

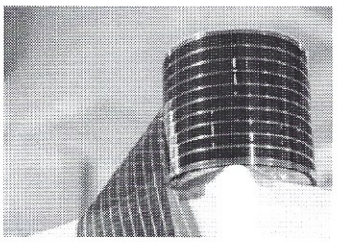
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Research & Technology 7 to 11 April 2014

Organic Electronics

According to a report by the German Academy of Science and Engineering (acatech), the field of organic electronics, which encompasses a wide range of applications, such as light sources, photovoltaics, printed electronics and batteries, is still very much in its infancy.

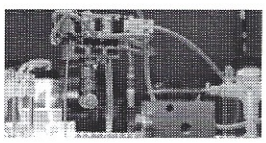


However, replacing the inorganic materials used in electronic devices - particularly devices that convert light into electricity (photovoltaics) or, conversely, electricity into light (light-emitting diodes) - with organic materials can be enormously beneficial from both a commercial and ecological perspective. It can also open up new applications and design possibilities, for instance, when it comes to large-scale lighting solutions, flexible light displays and energy generation.

The Organic Electronics Center is attuned to this trend, offering a central platform, where businesses, research institutions and universities present market-ready products and application-oriented solutions.

Main topics:

- Printed electronics
- OLED lighting elements
- Micro-OLED displays
- RFID labels
- Energy production and storage
- Organic photovoltaics



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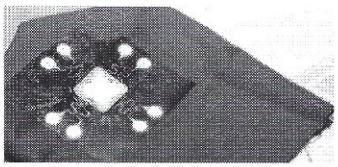
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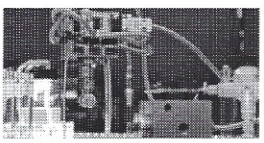
Research & Technology 7 to 11 April 2014

Textile Solutions

The Textile Solutions theme park at HANNOVER MESSE demonstrates the many possibilities of textile materials. Exhibitors use practical examples to show what can be done with fibers, filaments and fabrics. There is almost no branch of industry in which engineering textiles are not present, and yet their potential for industrial applications is far from exhausted.



There are ever more uses being developed for engineering textiles and smart textiles; they are found in the automotive sector and aeronautics, medical and environmental engineering, and architecture. The manifold features of high-tech textiles, including flexibility, low weight, breathability, weather resistance and extreme resilience, all point to the great potential of woven, knitted, fibrous and flexible surfaces. Companies in the textile sector see themselves increasingly as solution-oriented system suppliers for technical and industrial applications such as filters, fiber-reinforced building components, geotextiles and tapes. All of these individualized customer solutions rely on interdisciplinary collaboration between several industries.



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tech transfer - Gateway2Innovation
Better processes – more innovation

Bring your idea on the right track. Forge strategic alliances, establish partnerships and create global networks. With "tech transfer – Gateway2Innovation" you can achieve significant requirements for successful technology transfer.

The aim is to map parent information and contact platform for all questions concerning the technology transfer process. The initiative provides an efficient and practical planning framework on site for economy and science. Through a targeted approach, idea-providers are brought together with idea-seekers. This year for the second time the initiative provides a special day for ideas and innovation managers. A comprehensive forum program, the matchmaking platform b2fair and the internet innovation exchange, will offer the visitor a variety of ways to gather information about processes in innovation management.
Profil tech transfer

HANNOVER MESSE is a powerhouse of potential for industrial innovations – and part of its function is to highlight that potential for the benefit of visitors and exhibitors at the show.

Every year the exhibitors at Research & Technology, the leading international trade fair for research, development and technology transfer, use HANNOVER MESSE as a platform to present innovative technologies and revolutionary research findings. At the click of a button the online exhibitor and product search facility developed for HANNOVER MESSE allows visitors and exhibitors at the other trade shows to gain a detailed overview of these research projects, new product developments and technologies. Indexed by clearly defined technology fields, the search facility supplies detailed information and specific data such as development status, patent status or technical and commercial advantages. The integration of the entire range of technology exhibits into the existing systems also assists the marketing activities of catalogued exhibitors and significantly increases their chances of finding cooperation partners.
more

A day for idea and innovation managers will be offered for the second time on April 12th from 9.30 a.m. until 12.30 p.m at the HANNOVER MESSE 2013. This information and contact event is meant to encourage trade-spanning discussions on strategies, processes and methods in idea and innovation management. Practice-oriented presentations by companies will also show potential improvements innovation processes to participants.
more



In cooperation with the EU-projects C-Energy+, GBE-Factory and partners from the Enterprise Europe Network the NBank organises the international brokerage event **"TECHNOLOGY COOPERATION DAYS – Industrial Energy Efficiency"** at the HANNOVER MESSE 2013.

The event at tech transfer's stand in fair hall 2 is a perfect meeting point for companies, universities, research institutions and service provider. In pre-arranged meetings the event allows finding new business contacts, partners for R&D projects and other technological collaborations. The Technology Cooperation Days 2013 focus on technologies and solutions to improve energy efficiency in factories and industrial production as well as utilizing renewable energy in industrial buildings.

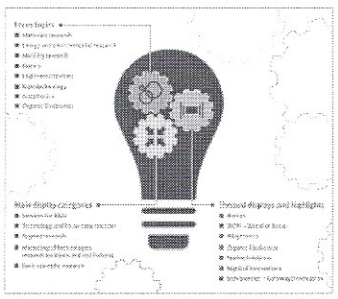
Further information, registration with user profile and selection of conversational partners:
www.technologycooperationdays.com

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Research & Technology

Industry worldwide faces enormous challenges. In order to deal with complex issues such as the continuing integration of industrial processes, the transition to renewable energy, the effi cient use of resources, sustainability, mobility, lightweight construction and the development of alternative resources and new materials, industry needs science. At the same time, R&D professionals need eff ective partners in industry and government in order to market their innovations successfully.



Leading Trade Fair for R&D and Technology Transfer

Adaptronics
WON - World of Nano
Bionics
Energy Research
Organic Electronics
Textile Solutions
tech transfer
Night of Innovations





Fruitful dialogue between science and business: Research & Technology was the marketplace for ideas and visions, and showcased fascinating innovations on the verge of market-readiness
learn more

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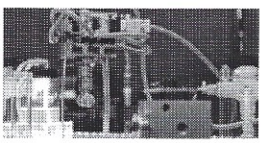
Adaptronic
Producing quiet

New application areas and sector-specific solutions in the field of adaptive structure systems will be presented by service providers from research and development at the Adaptronics theme stand.

Self-adapting, active-response mechanical systems - that is the goal of adaptronics. Where conventional mechatronic methods have reached their limits, this cross-disciplinary technology offers new possibilities. It integrates sensor and actuator functions into mechanical components or systems to improve their product features. Adaptronics is particularly useful in damping vibrations and reducing noise - for soundproof booths, machine casings, windows, rotor blades or textile machines, as well as in structurally integrated damage monitoring, form control or precision positioning.

Learn more at www.adaptronik.fraunhofer.de.





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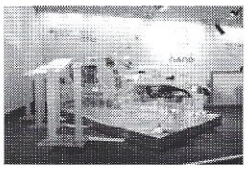
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WON - World of Nano
World of nanotechnology

The WoN World of Nano theme stand forms a central platform presenting the latest technological developments, processes and visions from the nanotechnology world.



Nanotechnology is already making major technology contributions in a wide range of application areas. It is used for example

for therapeutic hyperthermia, a cancer treatment based on nanoparticles,
to purify drinking water using nanoporous filters,
in wind turbines, for which ever larger rotors can be built to be extremely stable and yet very lightweight using carbon nanotubes, and
for corrosion protection using ceramic nano coatings to replace toxic chrome and nickel.

The presentation focus is on networking and technology transfer, as well as project initiation and management in the field of nanotechnology. Partners to the INITIATIVE Nano in Germany converge here, where they can easily be found by visitors.
You can learn more about participating in this theme area at www.worldofnano.net.

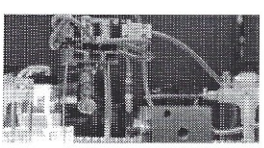
Trade professionals gain a unique overview of current applications for nanotechnology in industry, and also learn about trends and future visions being developed in research laboratories.

The core research and application focus areas at Nanotechnology – Made in Germany will once again attract considerable visitor interest at HANNOVER MESSE 2014. Under the umbrella of the INITIATIVE Nano in Germany, project:nano is responsible for the World of Nano and SchauPlatz NANO theme areas in Hall 2, which showcase much of what is happening in the nano sector. This established platform offers companies, universities and research institutes the best conditions for presenting their innovative technological developments, applications and visions in nanotechnology. As in previous years, VDI Technologiezentrum is the specialist sponsor, and is presenting among other things current BMBF flagship exhibits for German nanotechnology.

Main display categories Partner

ultra thin layers
lithography / electronics
ultra precise processing of surfaces
measurement and analysis of nanostructures
nanomaterials and molecular architectures
nanobiotechnology
further education and training

For further information please visit Nano Technology



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