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Press release

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LASER World of PHOTONICS

Photonics in 3D printing and automotive manufacturing is perfect material for the special exhibition

The automotive industry researches and develops like no other industry. Its innovations are increasingly based on photonics. Light is also the central tool in 3D printing, which is just on the cusp of industrial production. Reason enough to give each of these two areas of innovation their own special exhibitions at the LASER World of PHOTONICS from 22-25 June.

In keeping with the „International Year of Light and Light-based Technologies“ the trade fair will demonstrate just how closely innovation in industrial processes is associated with the intelligent use of light nowadays. Three special shows in tandem will focus attention on the role of lasers in manufacturing (Photons in Production „Next Generation“), on photonics as an enabling technology in automotive manufacturing (Photonics Applications in the Automotive Sector) and on additive manufacturing techniques (3D Printing – Additive Manufacturing).

New special show “Photonics Applications in the Automotive Sector”

Photonics is indispensable in automotive production. The new special show “Photonics Applications in the Automotive Sector” in Hall A3 showcases the most diverse application areas and latest application scenarios live and in a practical setting. A highlight will be the sporty BMW i8 plug-in hybrid, the first vehicle to feature the all-new light technology, laser light.

TRUMPF will demonstrate the entire range of laser applications in car factories – from laser welds in body manufacturing via laser machining of high-strength steels to the laser marking of the speedometers and control buttons.

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The potential of photonics in automotive engineering extends beyond manufacturing. For example, Polytec GmbH will be presenting optical systems for measuring vibrations and dynamics in the powertrain, in the vehicle interior or on the chassis. Vibrometers are also used in the electro-mobility arena. Newport Spectra-Physics GmbH will be showcasing infrared optics that assist motorists when driving at night. Also, together with partner Materialise, it will be presenting prototypes of door panels and dashboards manufactured using stereo lithography. UV lasers from Spectra-Physics are used in the rapid prototyping process to harden plastics. The special show will also put the plastic welding process in automotive engineering into perspective using an innovative industrial laser system from LIMO Lissotschenko Mikrooptik GmbH.

Special show "3D Printing – Additive Manufacturing" in Hall A3

Additive Manufacturing is making its way into the industrial process world. Lasers build components one layer by layer based on the 3D design data. Because this dispenses with expensive, time intensive tooling, the production of individual components or extremely short production runs becomes affordable – from spare parts to one-off production. The opportunities for functional integration, weight reduction and the manufacturing of highly complex geometries in one piece are a source of enormous potential.

The special show "3D Printing – Additive Manufacturing" reflects the successful collaboration between research institutes, system manufacturers and users. The spirit of cooperation assumes tangible form on the stands of system manufacturer Concept Laser GmbH and of the Augsburg-based user center of the Institute for Machine Tools and Industrial Management (iwb) of the TU Munich.

The iwb researchers are working with a Concept Laser system and will be showcasing components that have been made with it, such as for example

lightweight honeycomb structures with snap connections used in making aircraft wings. The Augsburg researchers will also be demonstrating an innovative thermographic process monitoring system for the laser melting process.

The Bavarian Laser Center and special “Additive Manufacturing” Research Center 814 of the University of Erlangen-Nuremburg will be exhibiting materials, manufacturing processes and component design for Additive Manufacturing. Selective laser melting of plastics is on the agenda, as is electron beam melting of metals and the construction of multi-material components - in each case including structural optimization, simulation and test procedures.

Exhibitor breadth reflects process diversity

The diversity of processes in Additive Manufacturing is reflected in the breadth of exhibitors at the special show. It ranges from start-up LightFab UG via the Fraunhofer Institute for Laser Technology (ILT), for Machine Tools and Forming Technology (IWU) and for Material and Beam Technology (IWS) to global player TRUMPF and system manufacturer SLM Solutions GmbH. Aachen-based LightFab UG is exhibiting products created by its selective laser-induced etching process (SLE): 3D biochips for medical diagnostics and 3D micro-components such as planetary gear drives and rotatable gear wheels made of glass or screw threads made of quartz glass.

TRUMPF is showcasing additive laser deposition welding for repairing and finishing surfaces, presenting specimen components to show what this innovative process is capable of. SLM Solutions will be bringing its compact SLM 125 laser beam melting system with it to Munich, a system specially designed for the R&D arena and for manufacturing smaller workpieces.

This and other press releases and related photos: here

More on World of Photonics Congress 2015: here

Photos LASER World of PHOTONICS 2013 and logos: here

About LASER World of PHOTONICS

The LASER World of PHOTONICS is the world's leading get-together of the laser and photonics industry. Europe's largest World of Photonics Congress will be taking place in parallel with the trade fair. The program comprises five scientific conferences of leading global organizations. Supplementing this Messe München GmbH will be offering practical lectures on the applications of photonics ("Application Panels"). The combination of trade fair and congress brings together research and application, thereby promoting the use and continued development of optical technologies. In 2013 the trade fair set an exhibitor record with 1,130 exhibitors from 37 countries. A total of 26,582 trade visitors from 72 countries entered the Messe München site.
In 2013 the World of Photonics Congress registered 3,400 participants with an offering of more than 2,800 lectures and presentations including poster presentations.
The LASER World of PHOTONICS has been organized every two years by Messe München International since 1973; the next event will take place in Munich from 22-25 June 2015, the next World of Photonics Congress will take place in parallel from 21-25 June 2015 in the ICM - International Congress Center Munich.

About the LASER World of PHOTONICS global network

The LASER World of PHOTONICS has developed an international network. The LASER World of PHOTONICS CHINA and the LASER World of PHOTONICS INDIA are leading regional trade fairs for optical technologies and are staged annually in China (Shanghai) or in India (alternating between Mumbai, Bangalore, New Delhi).

Messe München International

Messe München International is one of the world´s leading trade show companies. In Munich alone it organizes around 40 trade shows for capital and consumer goods, and key high tech industries. Each year more than 30,000 exhibitors and around two million visitors take part in the events held at the Messe München exhibition center, the ICM – International Congress Center München, and in the MOC Veranstaltungscenter München.
The leading international trade fairs of Messe München International are all independently audited.
In addition, Messe München International organizes trade shows in China, India, Turkey and South Africa. With a combination of affiliates abroad – in Europe, Asia and in Africa – and over 60 foreign representatives actively serving over 100 countries, Messe München International has a worldwide business network. The Group also takes a pioneering role as regards sustainability: It is the first trade-fair company to be awarded energy-efficiency certification from the technical inspection authorities TÜV SÜD.

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