

Reviews

Light is the Future – Laser World of Photonics 2015

Munich, Germany, 22 – 25 June 2015

Laser World of Photonics, held from June 22–25, shed light on the industry. The enormous energy inherent in the topic was tangible at the leading trade fair in Munich: there were around nine per cent more exhibitors (1,227) and more than ten per cent more visitors (more than 30,000) in attendance and a new hall was opened. Specific applications attracted keen interest.

“Laser World of Photonics is the most important platform for the international photonics industry” said Dr. Reinhard Pfeiffer, Messe München’s Deputy CEO. “The popularity among exhibitors is reflected in the rising demand. Many companies were presenting their products and innovations at the trade fair for the first time.” Far more than half of the exhibitors and visitors came from abroad. Pfeiffer: “The enormous growth in visitors from outside Europe is also down to countries such as the USA, China and Japan.”

Dr. Wilhelm Kaenders, President of Toptica Photonics AG, is in no doubt: “More than ever Laser World of Photonics is the world-leading Photonics marketplace. For us, the joint approach, congress and exhibition, is the secret to the success and justifies our own engagement in all levels of the event.”

Startup World: Young entrepreneurs forge ahead

The new initiative Startup World turned out to be a great success. The finalists of the first Photonics Award demonstrated the unlimited potential applications of Photonics in production and medicine: Nanolive, Norlase, 8strees, Femto-print, SwissLitho AG, Sand Made. Thorsten Rudolph, CEO of the Anwendungszentrum Oberpfaffenhofen, said: “Laser World of Photonics is the ideal platform for the first Startup World. This is where young companies can showcase their product innovations to a wide public and establish good contacts.”

With photonics to the car of the future

Photonics is revolutionizing automotive production: lasers cut car bodies, image processing ensures safe navigation

within the traffic, laser headlights turn night into day. This was demonstrated by the new special show “Photonics Applications in the Automotive Industry”. Exhibition Director Katja Stolle explains: “Laser World of Photonics is the perfect meeting place for users and suppliers. Innovations here underpin technological leadership.”

Additive manufacturing for miracles of production and more ...

Additive manufacturing is used in lightweight construction, dental technology and medicine: that was demonstrated by various exhibitors as well as by the special show “3DPrinting – Additive Manufacturing”. The two meter high and six meter wide letters “LIGHT” created by the Fraunhofer ILT using generative manufacturing, symbolized the importance of generative manufacturing processes for lightweight construction. The company Materialise created a stir with a prototype heart from a 3D printer.

Photonics affects all fields of endeavor

Internet, Smartphone, car, road traffic, aviation, food and beverages, medical operation, disease diagnosis: Photonics is intelligent, is part of our everyday lives and is transforming our world: “Photonics is fascinating and has truly become a game-changer in industry and society” said Wolfgang Boch of the European Commission. Yanne Chembo of the African Physical Society is in no doubt: “We are the storytellers of light.”

Gathering of the elite at the World of Photonics Congress

The International Year of Light and Light-based Technologies declared by Unesco was a golden thread running not just through the trade fair but also through the World of Photonics Congress in the adjacent International Congress Center Munich ICM. The Munich event is important even for Nobel Prize winners: “Trade fairs such as this are very important because they provide the pieces of the puzzle for the next point and steps in my career”, says Dr. Eric Betzig, Nobel

LASER World of
PHOTONICS



Prof. Stefan Walter Hell, Director of the Max Planck Institute for Biophysical Chemistry in Göttingen, and Dr. Eric Betzig, Howard Hughes Medical Institute, Nobel Prize winners in Chemistry, 2014.

Laureate in Chemistry, 2014. Another three Nobel Prize winners delivered lectures: Prof. Stefan Hell, Prof. Serge Haroche and Prof. Theodor Hänsch. That again made the World of Photonics Congress, with eight scientific conferences, more than 2700 lectures and approximately 3500 participants, an important meeting place for the international scientific elite.

Top marks from visitors and exhibitors

The results of the poll by market research institute TNS Infratest testify to the excellent atmosphere: 97 per cent of visitors find the trade fair “excellent to good” and will very probably return. 94 per cent of exhibitors find the trade fair “excellent to good” and 97 per cent will very probably take part again.

Photonics industry has momentum

The outlook is good for the next Laser World of Photonics, from June 26–29, 2017. According to a recent study by the Federal Ministry of Education and Research and trade associations Spectaris, VDMA and ZVEI the global turnover of the Photonics industry in 2014 was around 350 billion euros. It is due to hit 615 billion euros by 2020.

www.world-of-photonics.com

Previews

Euromold 2015 Taking Big Steps on the Road to Success

Düsseldorf, Germany, 22 – 25 September 2015



World Fair for Mold- and Pattern Making, Tooling, Design, Additive Manufacturing and Product Development takes place from September 22 to 25, 2015, at the exhibition centre Düsseldorf.

After numerous developments in recent months – specifically for the conceptual new course of Euromold – the organizer summarize as result: “Euromold 2015 exceeds our expectations significantly” states Diana Schnabel. “Apart from our longtime exhibitors, which remain loyal to us in great numbers, also in regards to the move to Düsseldorf, we find many new exhibitors as well, especially from the additive manufacturing & 3D printing industry with their booming and dynamic exhibitors from Asia and the United States.” The recently announced strategic partnerships; starting with Dr. Terry Wohlers, Wohlers Associates, Inc, Fort Collins,

Colorado, the most profound expert of the sector, is being recognized as a big step into the future. His expertise stimulates the topic additive manufacturing & 3D printing at Euromold significantly. Moreover, the partnership with the Society of Manufacturing Engineers SME (Dearborn, Michigan) is notable – being one of the most widely spread engineering associations world wide. The SME organizes “Rapid” the worldwide biggest and most important congress in its field and during Euromold, SME will organize a similar event with many highly recognized speakers. Together with the new hall layout, which connects the different Euromold areas much better than in the past, very strong and future oriented impulses will be set.

Next to the strategic innovations some highlights should be mentioned already. Keyence, a leading producer

of sensors, measuring equipment, laser marking systems, microscopes and vision-systems will present its 3D printer Agilista. Meusbürger, leading manufacturer for high precision tooling standards will present inductive end switches, which are horizontally and vertically designed including plugs, which allow various assembly possibilities. The new Go!Scan 3D Scanner of Creaform GmbH, a worldwide leading company for portable 3D measurement technology and supplier of 3D engineering services, is able to scan with its very high scan velocity in maximum 5 minutes with an accuracy of up to 0.1 mm and a resolution of up to 0.2 mm.

www.euromold.com

Fakuma 2015 – More International Than Ever

Friedrichshafen, Germany, 13 – 17 October 2015



With a fully occupied exhibition centre in Friedrichshafen on Lake Constance, the 24th edition of Fakuma is headed for record-breaking figures. And thus the Fakuma international trade fair for plastics processing is firming up its recognised reputation as Europe's number one industry event for injection moulding, extrusion and thermoforming technologies.

With its user-oriented focus on plastics processing, Fakuma has acquired a special status, because similarly positioned trade fairs have a more plastics-polytechnical orientation and thus a different emphasis.

Manufacturers and distributors from 35 industrialised nations will present a sparkling array of new technologies and processes, as well as applications from which the industry sector will already be able to profit in October 2015! Time is money, and short time-to-market promises an advantage and thus more business success, for which reason the

manufacturers and distributors will present a host of world's firsts and innovative processes at Fakuma 2015.

Within this context, additive and generative 3D processes have of course taken on an exceptional role, even though precisely this segment and its associated processes, such as stereo lithography and laser sintering, have been part of Fakuma's exhibition portfolio for more than twenty years, whereas they were used in the past above all for prototyping and the production of samples. Based on rapidly expanding material diversity and material characteristics which are customised for specific functions, the spread of 3D processes might well be greatly accelerated and more than just round out offerings for manufacturing processes involving plastic processing.

The extent to which the Fakuma international trade fair for plastics processing has established its presence within the industry sector is illustrated

by further increases in the number of foreign manufacturers and distributors from more than 35 industrialised nations. As has traditionally been the case, Germany is represented by the largest number of exhibitors (925 companies) followed by Italy (102), Switzerland (97), Austria (63), France (43), China (41), Portugal (27), the Netherlands (25), the Czech Republic (20) and Turkey (17), so the Europe still plays the leading role.

At any rate, manufacturers and distributors from all over the world view Fakuma as the most suitable business platform for presenting their companies to expert visitors in the highly demanding German and European markets.

Fakuma 2015 is expecting roughly 46,000 expert visitors from well over one hundred countries.

www.fakuma-messe.de

Sheet Metal Processing Meets Joining Technology: Blechexpo / Schweisstec

Stuttgart, Germany, 3 – 6 November 2015

At the 12th edition of the Blechexpo international trade fair for sheet metal processing and the 5th edition of the Schweisstec international trade fair for joining technologies, the practice-oriented trade fair duo is continuing its successful development at a very high, process-sequence level. To date, roughly five months before the trade fair opens, more than thousand exhibitors from 35 countries have already registered. And thus Blechexpo and Schweisstec are clearly on a record-setting course and are able to announce a 14 % increase in exhibitor numbers and 21 % more exhibition floor space. This is not least due to the more than a hundred new exhibitors who have decided to present their companies' products and services to national and international expert visitors for the first time and, for very logical reasons, have chosen Blechexpo and Schweisstec to this end. Because the steady upward trend and above all the continuously increasing internationalism of these events make it convincingly clear that the comprehensive presentation of the process sequences for sheet metal, profile and pipe processing is hitting the bull's eye amongst the target group and thus reflects the interests of expert visitors from all over the world.

This development can be assessed by the exhibitors as mark of confidence and it also bears witness to the great worldwide importance of Blechexpo and Schweisstec as an annual event for the internationally successful industry sector. With regard to the more than

hundred new exhibitors who are being welcomed with open arms, it can be added that a large number of renowned manufacturers and distributors from the fields of measuring technology, image processing and vision systems have registered to participate at Blechexpo und Schweisstec.

As a result, the process sequence goes full circle because, for example, the digitisation of models and prototypes as well as metrological inline quality inspection have become indispensable building blocks in the process sequence for the processing of sheet metal, pipe and profiles – including feedback of measurement data and thus the correction values which have been activated for production programs.

Comprehensive presentation of top industry players from domestic and export markets

On the one hand, a practice-oriented presentation of hardware and software in light of new or optimised technologies and processes, products and systems, as well as tools and accessories, on the other hand an objective dialogue between suppliers and users and, as a third constituent, a rounding out with theoretical and practical information at the exhibitor forum or the Schweisstec Conference – this mix establishes a basis for more decision-making security and thus for investments of any magnitude. This is the specific objective of a technical trade fair, for which reason Blechexpo and Schweisstec have seen themselves



as a sector-oriented information, communication and business platform right from the very start, and continue to develop themselves in this direction. This applies to such an extent that above all top suppliers and manufacturers from domestic and export markets present their companies to international expert visitors at Blechexpo and Schweisstec, with exhibitors from Germany (about 670), Italy (105), Switzerland (36), the Netherlands (23), Turkey (22), France (19) and China (16) making up the largest delegations.

Blechexpo and Schweisstec will take place at the Stuttgart Exhibition Centre from 3 to 6 November 2015 and is being organised by private trade fair promoters P. E. Schall GmbH & Co. KG.

www.blechexpo-messe.de
www.schweisstec-messe.de

From Laser Optics to Micro Photonics

Berlin, Germany, 26 – 27 November 2015

In October 2016 laser optics, the platform for the industry in Berlin, becomes micro photonics and will be relaunched on the market as an international trade fair and congress. The first edition of micro photonics will take place on 11 to 13 October 2016 at Berlin Expo-Center City, after which this three-day trade fair and congress will take place annually. The focus of the event is on the international congress organised in

association with the K.I.T Group and other leading partners. This year, on 26 and 27 November, a two-day event on the Berlin Exhibition grounds which includes lectures by experts on the topical issue of biophotonics will preview forthcoming events at micro photonics. An exhibition will also be taking place and there will be numerous opportunities for meeting and exchanging views. micro photonics is organised by Messe



Berlin in association with Berlin Partner für Wirtschaft und Technologie GmbH and other partners.

www.micro-photonics.de

11th International Laser Technology Congress AKL

Aachen, Germany, 27 – 29 April 2016



“In the right light, at the right time, everything is extraordinary.” This

statement of the American artist Aaron Rose can be easily adapted from “real life” to the world of production technology and especially of laser technology. With the right laser beam at the right place and at the right time you can generate extraordinary impacts. The key issue in laser technology is tailored light. While multi kW high power continuous wave CO₂- or solid-state lasers are suited for cutting body in white parts for the automotive industry, ultrafast lasers are predestinated for cutting ultrathin or hardened glass for displays. The right laser for the right application – this is one of the key topics of the 11th International Laser Technology Congress AKL, hosted by the Fraunhofer Institute for Laser Technology ILT from April 27th to April 29th in Aachen, Germany.

The AKL takes place every two years and has developed into the largest European industry congress for applied laser technology in manufacturing. In 2014, 629 experts from over 20 countries came to Aachen to exchange views about current market and technology trends as well as future-changing research and development findings, such as additive manufacturing, precision machining, and new high-power ultrafast lasers. Besides about 70 lectures, 45 sponsoring exhibitors in Aachen’s conference



AKL laser technology live demonstrations at the Fraunhofer ILT (Source: Fh. ILT)

center Eurogress and more than 80 live demonstrations at Fraunhofer ILT will be offering a good opportunity for direct exchange with laser technology experts.

Supporting organizations include European Commission, European Photonics Consortium EPIC, Arbeitskreis Lasertechnik e.V., European Laser Institute, OptecNet as well as industrial associations such as Spectaris, VDA, VDMA and VDI. The program is based on the diverse interests of the visitors: on the first day the seminar Laser Technology ABC’s is offered for newcomers in the technology. The Technology Business Day addresses executives and marketing managers who are interested in laser market trends. For the first time two special seminars are offered. The Forum

“Laser Additive Manufacturing” focuses on laser metal deposition and selective laser melting applications for various branches of industry like aircraft, automotive, tool or medical industries. The Forum “Process Control” addresses all applications of lasers in material processing from cutting to welding and from additive manufacturing to drilling and structuring.

The key part of the AKL on the second and third day is devoted to all innovative aspects of laser material processing. In three parallel sessions i.e. Macro and Micro Laser Material Processing and Laser Sources, around seventy experts from research and industry will be updating the participants to the current trends in laser technology.

On April 27, 2016, within the scope of the AKL’16, the Arbeitskreis Lasertechnik e.V. and the European Laser Institute ELI will be awarding the “Innovation Award Laser Technology 2016” for excellent innovations in the development and application of lasers in production technology. The award is endowed with 10 000 Euros. The European research prize is directed at applicants from the European industry as well as European universities or R&D centers. Applications can be submitted until January 15, 2016 (see p. 6).



AKL Sponsors exhibition – meet the laser community (Source: Fh. ILT)

www.lasercongress.org
www.innovation-award-laser.org