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Press Release

LASER World of PHOTONICS 2017

Ultra-precision in optical manufacturing

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Lenses with a surface accuracy in the nanometer range are behind ever more accurate laser and optical systems. Manufacturers depend on ultra-precise optical and mechanical ablation processes, innovative coating processes and extremely accurate measuring technology to venture into these nano-worlds. The latest trends in optical manufacturing will be showcased by the world's leading trade fair [LASER World of PHOTONICS](#), from June 26–29, 2017 in Munich.

The diversity of lenses, their shapes, sizes and materials is growing all the time. Applications in non-visible wavelengths from x-rays and ultraviolet to the far infrared also require special optics, such as material processing using short pulse and ultra-short pulse lasers or imaging techniques in the medical and research fields and industrial quality control.

The required surface accuracy tolerances of the lenses are already in the nanometer range – in some cases even in the sub nanometer range. The ability to polish lenses to such smoothness and dimensional accuracy in a multistage process requires on the one hand technologies to hold and center them with precision. On the other hand, a dovetailing of mechanical, chemical and optical processing techniques is called for, permitting ablation or coating of the already polished surfaces to atomic levels

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of accuracy in some cases. Measurements accompanying the process ensure that any roughness and defects are eliminated. The required shape; planar convex or planar concave, spherical, aspherical or cylindrical, as the case may be, is created, and the desired optical effect of the frequently multi-layered coatings achieved.

Ultra-accuracy at the LASER World of PHOTONICS

Manufacturing and measuring techniques for ultra-precise optics are constantly developing. To expedite the development, leading providers - including [Schneider](#), [Sill Optics](#), [NTG](#), [OPTEG](#) and [Trioptics](#) as well as numerous research institutes – have founded the [Kompetenznetz für Ultrapräzise Oberflächenbearbeitung](#) (CC UPOB e.V. - Skills network for ultra-precise surface processing). Together, they are promoting expertise in mechanical and chemical processing, ion beam and plasma processing as well as optical processing techniques for ultra-precise optics and their measurement and characterization. Earlier research findings will be on view at the LASER World of PHOTONICS 2017 as will also be their embodiment in the machines and plant, techniques, measuring devices and optics of the exhibiting CC UPOB member companies. In addition, other market leaders such as [Satisloh](#) and the [OptoTech Optikmaschinen GmbH](#) as well as almost 100 other exhibitors will be showcasing innovative solutions in the optical manufacturing arena.

Optimized on ophthalmic lenses - applied to laser optics

A number of the leading suppliers of processing machines for precision optics have over many years optimized their processes in the course of manufacturing ophthalmic lenses and are now

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able to build on this solid industrial foundation with their innovations in the field of [precision](#) and [ultra-precision optics](#). Others, such as [Nanoscribe AG](#) or [Innolite GmbH](#), transfer fresh expertise from research institutes to the market as spin-offs. Be it the manufacturing of [Micro-lenses courtesy of 3D printing technology](#) or the production of plastic and metal optics using [ultra-accurate diamond machining](#).

At [LASER World of PHOTONICS](#) 2017 visitors can experience the entire range of techniques – gaining profound insights into key photonics technologies in the process.

This press release and associated images: [here](#)

Photos LASER World of PHOTONICS 2015: [here](#)

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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 Veranstaltungszentrum 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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