

LASER World of PHOTONICS: the world's leading trade fair for laser material processing



SAVE THE DATE

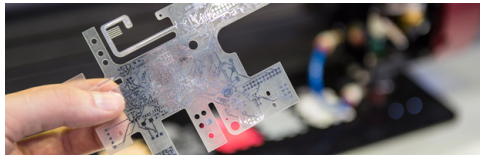
LASER World of PHOTONICS

Date: Jun 21 - 24, 2021

Laser material processing has evolved into an integral part of manufacturing processes across various sectors. Laser cutting, laser drilling, laser welding and laser marking are just a few examples from the **diverse fields of application** for lasers.

Lasers can be used for processing all kinds of materials: metals, plastics or translucent materials such as glass. Laser material processing is equally popular in manufacturing **large components** and processing tasks in the **micron range** such as in smartphone production and organic or printed electronics.

Trend topics of laser material processing



Laser surface treatment and **laser-based additive manufacturing processes** are two of the industry's current hot topics:

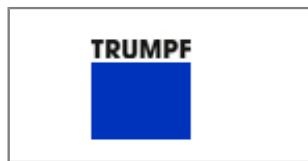
- ✓ Laser-based surface fusion processes such as **deposition welding** and **high-speed cladding**.
- ✓ Preparation of **corrosion protection coatings** using processes such as thermal laser spraying.
- ✓ **Laser-Ablation**: a laser is used for the (selective) removal of material, e.g. to remove only a specific material from a component without causing damage to any other area.
- ✓ **Laser engraving** and **laser marking** to ensure identifiability and traceability of components and products as well as for industrial and

product marking. After all, lasers support processing materials of any kind and shape (aluminum, stainless steel, silver, textiles, plastics, wood, composites, glass, leather, rock, paperboard and even apples).

Market leaders and innovative companies in laser material processing

At LASER World of PHOTONICS, leading manufacturers using laser material processing present their **innovative products** and the **latest solutions**.

Our leading manufacturers include:



TRUMPF Laser- und Systemtechnik GmbH



Jenoptik



Innolas Solutions



Laserline GmbH



IPG Laser



Han's Laser Technology Industry Group



Coherent



FOBA Laser Marking + Engraving



SCANLAB GmbH

Lasers as enablers of tomorrow's mobility



Laser material processing plays a particularly significant role in the **automotive sector**. The following innovative topics facilitate tomorrow's mobility:

✓ Laser processing in lightweight engineering

Lasers enable using and processing material combinations such as metal and plastic, aluminum and steel, or special composite materials for lightweight engineering.

✓ Sustainable production through laser welding

The use of lasers in applications such as remote welding in the automotive sector facilitates shorter process cycles and reduced energy consumption, ultimately leading to a decrease in production costs.

✓ Ultra-precise laser material processing in the micron range

Lasers work with unsurpassed precision, making them indispensable tools for high-precision micromaterial processing applications such as in manufacturing processes for electronics components, semiconductors, photovoltaics components and smartphones.

Novelties in laser material processing



As leading international exhibition, LASER World of PHOTONICS is the first to present the **latest innovations in the area of laser material processing** in cooperation with **market leaders** and **newcomers**.

To give an example: Micromac presented new laser processes and machine solutions for glass and sapphire processing as well as roll-to-roll laser processing of flexible substrates at the last LASER World of PHOTONICS.

Supporting program for laser material processing



Benefit from the **unique supporting program** at LASER World of PHOTONICS. Here, where practical applications of innovations and the associated research go hand in hand, you can get insights into the latest applications, best practice tips and an outlook on the laser technologies of tomorrow.

LiM—Lasers in Manufacturing: conference on laser material processing

“**LiM—Lasers in Manufacturing**” is a dedicated scientific conference on laser material processing. It comprises three thematic sections:

- Macro Processing
- Micro Processing
- Additive Manufacturing

Here you will learn about the latest research projects.

Lecture program

The “**Laser Materials Processing**” forum is your port of call if you wish to get informed about the variety of laser material processing applications in industrial and production environments.

Apart from product presentations by our exhibitors, it will host **practical lecture series** on all days of the trade fair. The lectures at LASER World of PHOTONICS 2019 include the following:

- Modelling and Simulation of Laser Material Processes
- Perspectives and challenges for applications with Ultrashort Pulsed Laser
- No E-Mobility without Laser Technology
- Smart Production of Metallic Parts by Additive Manufacturing
- Machine Intelligence and the Role of Photonics
- Laser in Microelectronics: The Future is digital

Guided tours



Experts will accompany you on our guided tours with selected topics. These experts offer **support for your specific problems** within the framework of a face-to-face discussion.

In 2019, guided tours in the area of laser material processing include the following:

- Inline process monitoring of laser welding processes
- Guidance and shaping of high power laser radiation

LASER World of PHOTONICS is the industry’s leading trade fair and offers you an extensive insight into applications, innovations and research in the area of laser material processing.

Subscribe to the [LASER World of PHOTONICS Newsletter](#) now and always stay up to date! We will regularly bring you up to speed with news on the trade fair and highlights from the supporting program.
