PRESS RELEASE

AKL'22: Laser Technology – Productive, Flexible and Smart

From May 4 to 6, 2022, laser manufacturers and users from various industries will meet for the 13th time at the "AKL – International Laser Technology Congress." Prof. Constantin Häfner, director of the Fraunhofer Institute for Laser Technology ILT, is pleased to welcome the laser community live in Aachen for AKL'22, particularly since the congress had to be postponed due to the pandemic. 87 speakers bring participants up to date on the current status and trends in laser technology in production. Whether it's about productivity increases in additive manufacturing, AI-supported laser systems or networked digital process chains for the smart production of tomorrow, the latest findings of applied research as well as pioneering achievements of the industry will be presented and discussed at AKL'22. Registration for AKL'22 is now open at www.lasercongress.org.

The "AKL – International Laser Technology Congress" has established itself in Europe as the leading forum for applied laser technology in production. The AKL'22 also follows the proven structure of previous years: In addition to the core conference, the first day, Wednesday, May 4, 2022, will once again be dominated by parallel expert forums that will dive deeply into the production topics of additive manufacturing, process monitoring and digitalization. In addition, Fraunhofer ILT will be devoting itself to photonic issues in quantum technology for the first time. This is an exciting new field that will also have a long-term impact on digitalization issues in production technology, such as the management of big data and AI.

Expert forum "Process Monitoring & Digitalization": Optimizing laser use with AI

The spectrum of research aspects in the field of artificial intelligence (AI) ranges from machine learning in industrial practice to the use of augmented reality and data analysis with neural networks. However, AI is only a small component in the expert forum "Process Monitoring & Digitalization," which focuses on quality control and optimization of various laser manufacturing processes such as cutting, welding and additive manufacturing.

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Expert forum “Laser Additive Manufacturing”: Productivity leaps in AM

Participants of the expert forum “Laser Additive Manufacturing” will have the opportunity to spend the entire day learning about AM technologies. Initially, the focus will be on laser material deposition (LMD). In addition to the question of rapid alloy development, the workflow in laser material deposition will be examined in its entirety. Participants will also learn how extreme high-speed laser material deposition, or EHLA, has evolved into EHLA 3D.

The second part of the forum will focus on laser powder bed fusion (LPBF). For 3D printing to achieve a breakthrough in the manufacturing industry, the entire data chain must be considered. Experts will also shed light on simulation tools, process control systems and concepts for increasing productivity.

New: Expert forum “Quantum Technology”

Quantum technologies are currently being advanced internationally at a cost of billions. Here, we are at the beginning of a technical revolution that will enable fundamentally new applications. These include quantum imaging, quantum communication and quantum computing. In the expert forum “Quantum Technology,” interested parties will gain insight into the current state of research and development. Among other things, this forum will highlight quantum-safe encryption for optical networks and frequency standards for quantum applications as well as the use of quantum technology for inline monitoring.

Laser markets – Advances in knowledge for decision makers

At the Technology Business Day, managing directors, marketing managers and strategists will receive an overview of the laser markets in Europe, Asia and America with an in-depth look at technological trends in individual areas such as e-mobility, micro-manufacturing and 3D printing.

For laser newcomers, Fraunhofer ILT is also offering the popular Laser Technology ABC’s seminar on May 4, 2022. There, companies with little or no experience in laser technology will receive a structured, hands-on overview: from the selection of suitable beam sources and handling systems for various applications to safety aspects in industrial laser technology.

In addition, more than 40 speakers from industry and science will shed light on the current state of laser technology in the field of macro and micro laser material processing as well as laser beam source development on May 5 and 6, 2022. All AKL´22

participants will also have the chance to make contact with around 40 well-known laser, component and system manufacturers at the sponsors' exhibition accompanying the conference and to discuss their questions in individual meetings.

Supporting organizations

The organizer of the "AKL'22 – International Laser Technology Congress" is Fraunhofer ILT. The European Commission, the European Photonics Industry Consortium EPIC, OptecNet Deutschland and the industry associations SPECTARIS, VDA, VDMA and VDI Technologiezentrum assist the AKL'22 as supporting organizations.

Registrations for AKL´22 now possible!

Presentations will be given in English or German with simultaneous translations into the other language. Register now for AKL'22 and take advantage of the early bird discount until March 4, 2022. Visit www.lasercongress.org.

Image 1:
In addition to more than 80 lectures, the participants of AKL'22 in Aachen can once again expect plenty of opportunities for networking. In the picture: Exhibition of sponsors of AKL'18.
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Image 2:
Prof. Constantin Häfner, Director of the Fraunhofer ILT, opens the Gerd Herziger session of the Laser Technology Conference on May 5, 2022 with the question "Laser beam source development – Quo vadis?"
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Image 3:
Registrations for AKL'22 are now open at www.lasercongress.org. Early bookers can secure a 10 percent discount.
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