

PRESS RELEASE

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AKL'24: Laser Technology for the Production of Tomorrow

From April 17 to 19, 2024, laser manufacturers and users from various industries will meet for the 14th time at the “AKL - International Laser Technology Congress” in the Eurogress in Aachen. 82 speakers will inform the visitors on the latest trends in laser technology in production. AKL'24 will present and participants will discuss the latest findings from applied research and pioneering achievements in the industry – from smart solutions for functional surfaces, AI-supported laser systems to networked digital manufacturing systems for the production of tomorrow. Registration for AKL'24 is now open at www.lasercongress.org.

Organized by the Fraunhofer Institute for Laser Technology ILT in Aachen for almost 30 years, the “AKL - International Laser Technology Congress” has established itself as the leading forum for applied laser technology in production in Europe. In addition to the core conference over three days, the first day will once again be dedicated to parallel expert forums with deep dives into the topics of AI-supported photonics, functional surfaces and quantum technology.

Expert forum “Digitalization & AI in Photonic Production”

The range of research aspects and innovations in digital photonic production is extensive – from digitally networked production systems in laser material processing to data fusion for AI-based process monitoring systems. Application examples include digital sensor technology for reliable brake-disk production or automated testing in battery production using laser-based ultrasonic excitation. Experts will also discuss the opportunities and limitations of AI support.

Expert forum “Functional Surfaces through Laser Processing”

Participants in the expert forum “Functional surfaces through laser processing” will have the opportunity to spend the whole day dealing with the efficient processing, functionalization and refinement of surfaces. The first part of the forum will provide an overview of various surface processing methods, e.g., for improving tribology, wear and corrosion protection of stressed components and for manufacturing extremely complex components. The second part of the forum will focus on electronic coatings

Press contact

Petra Nolis M.A. | Head of the Communications Group | Telephone +49 241 8906-662 | petra.nolis@ilt.fraunhofer.de
Fraunhofer Institute for Laser Technology ILT | Steinbachstraße 15 | 52074 Aachen, Germany | www.ilt.fraunhofer.de

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and optical surfaces. One of the goals of the industry is to increase sustainability in battery cell production. By functionalizing layer-by-layer with laser radiation, the industry can produce components with less energy, fewer resources and minimal thermal stress on the workpiece.

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Expert forum “Quantum Technology & Photonics”

Quantum technologies are currently being driven forward internationally at a cost of billions. We are at the beginning of a technical revolution that will enable fundamentally new applications. These include quantum imaging, quantum communication and quantum computing. The expert forum “Quantum Technology & Photonics” will give interested parties insight into the current status of R&D activities in this field. For example, experts will provide information on the latest developments in low-noise frequency converters as a key component for the development of the quantum internet. The use of quantum technology at Deutsche Telekom will also be highlighted as an application scenario.

Laser markets – Giving an edge to decision-makers

Managing directors, marketing managers and strategists will receive an overview of the laser markets in Europe, Asia and America at the Technology Business Day. In addition, experts will discuss technological trends in the use of laser technology in the energy sector.

Technology conference – the centerpiece of AKL'24

At the beginning of the Gerd Herziger Session, Dr. Peter Leibinger (Chairman of the Supervisory Board of Leibinger SE), Dr. Christopher Dorman (VP, Coherent) and Dr. Christoph Rüttimann (CTO, Bystronic Group) will address the question – from the perspective of technology suppliers – of how business models and value creation in laser technology are changing as a result of digitalization and AI. This panel discussion will be moderated by Prof. Constantin Haefner, Director of Fraunhofer ILT.

On April 18 and 19, 2024, experts from industry and science will also explain the status and prospects of laser material processing, laser beam source development and medical technology in 15 expert sessions. All AKL'24 participants will also have the opportunity to make contact with around 50 laser, component and system manufacturers at the exhibition accompanying the conference and discuss their questions in individual meetings.

Innovation Award Laser Technology 2024

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On the evening of April 17, 2024, the Innovation Award Laser Technology 2024 will be presented in the Coronation Hall of Aachen City Hall in front of around 300 guests. Every two years, the Arbeitskreis Lasertechnik e.V. and the European Laser Institute ELI e.V. bestow this European science and technology award for outstanding innovations in the field of laser technology.

“Laser Technology Live” in Europe's largest laser system park

The highlight of the congress will once again be the popular “Laser Technology Live” event on April 18, 2024, with around 60 live demonstrations and presentations in the Fraunhofer ILT laboratories. Researchers from the institute and the cooperating chairs at RWTH Aachen University will provide insights into the latest systems, processes and R&D results and will be available for in-depth discussions.

Supporting organizations

The organizer of the “AKL'24 – International Laser Technology Congress” is Fraunhofer ILT. Assisting AKL'24 as supporting organizations are the European Commission, the European Photonics Industry Consortium EPIC, OptecNet Deutschland and the industry associations SPECTARIS, VDA, VDMA and VDI Technologiezentrum.

Registration for AKL'24 now possible!

The presentations will be held in English or German with simultaneous translation into the other language. Take a look at the detailed conference program, register now for AKL'24 and take advantage of the early bird discount until February 27, 2024 at www.lasercongress.org.

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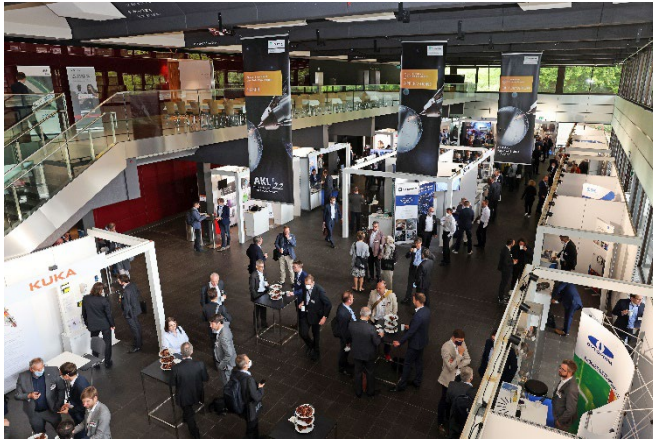


Image 1:
In addition to the presentations, the participants of AKL'24 in Aachen will once again have plenty of opportunities for networking. In the picture: accompanying exhibition of AKL'22.
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Image 2:
Prof. Constantin Haefner, Director of Fraunhofer ILT, opens AKL'24 and moderates the Gerd Herziger session. In the picture: Opening of AKL'22.
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Image 3:
Registration for AKL'24 is now open at www.lasercongress.org.
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Professional contact

Dipl.-Betw. Silke Boehr

Head of Marketing Group
Phone +49 241 8906-288
silke.boehr@ilt.fraunhofer.de

Fraunhofer Institute for Laser Technology ILT
Steinbachstraße 15
52074 Aachen, Germany
www.ilt.fraunhofer.de

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