PRESS RELEASE

QUANTUM PHOTONICS 2025: "A strong signal for Thuringia as a location for innovation"

New quantum trade event starts in Erfurt

Erfurt

Making Thuringia visible as a hub for regional and international quantum research — that is the aim of the new QUANTUM PHOTONICS trade event, which will be held in Erfurt for the first time from May 13 to 14. The Fraunhofer Institute for Applied Optics and Precision Engineering IOF is a member of the scientific advisory board of the new trade fair format and will be presenting its own quantum highlights as well as accompanying specialist lectures.

Photonics quantum technologies are a key technology for the world of tomorrow. Particularly in sections such as highly secure communication, more efficient information processing and high-resolution imaging, they open up opportunities for a fundamental paradigm shift. Numerous companies and research institutions in Thuringia, including the Fraunhofer IOF, have been strongly positioned in the research and development of quantum technologies for many years together with a wide range of partners.

In order to make the diverse regional activities in this future-oriented field visible and to strengthen the network, the Messe Erfurt is organizing QUANTUM PHOTONICS for the first time. The event considers itself as a triad of trade exhibition, congress and networking event and offers a platform for exchange between research, industry and politics. Fraunhofer IOF, represented by the Deputy Director of Fraunhofer IOF Dr. Ramona Eberhardt and Fraunhofer Research Manager Dr. Stephanie Hesse-Ertelt, is a member of the scientific advisory board of the new trade fair format.

"Photonics quantum systems at the cutting edge"

"The event sends out a strong signal for Thuringia as a location for business and innovation," emphasizes Prof. Andreas Tünnermann, Director of Fraunhofer IOF. "The regional innovation ecosystem in Thuringia, consisting of Thuringian research institutions and companies, enables top-level research and development into photonic quantum systems." Together with Mario Suckert, Thuringia's State Secretary for Economic Affairs, and Michael Kynast, Managing Director of the Messe Erfurt, Andreas Tünnermann will officially open the event on May 13.

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Quantum technologies for a wide range of applications

At the trade show itself, the institute will be presenting current research results from the world of quanta. The focus will be on scalable concepts for state-of-the-art quantum computers, optical systems for quantum communication in terrestrial and satellite-based networks and new imaging methods that enable high-resolution diagnostics even in previously unexplored spectral ranges.

Visitors will find the Fraunhofer IOF stand in Hall 2, number 2-710.

Research impulses on the congress and trade fair stage

The institute's appearance will be accompanied by a keynote speech at the "Quantum for Instrumentation and Measurement" forum as part of the QUANTUM PHOTONICS congress as well as by numerous technical contributions in the trade fair program.

On the congress stage on May 14, Dr. Sebastian Schmitt from Fraunhofer IOF will give a keynote speech on "Quantum optics at chip level: overcoming challenges, exploiting market opportunities", providing strategic insights into the translation of research results into marketable technologies.

A highlight on the trade fair stage will be the panel on the QuNet project — an initiative of the German Federal Ministry of Education and Research (BMBF) for research into highly secure quantum communication for authorities and critical infrastructure. The panel will start on May 13 at 1:30 pm.
Other presentations by Fraunhofer researchers from Jena on the trade fair stage will shed light on specific fields of application and technological challenges along the entire quantum photonics value chain.

Further information

Further information on the Fraunhofer IOF's presence at QUANTUM PHOTONICS:
https://www.iof.fraunhofer.de/en/events/fairs-exhibitions/quantum-photonics.html

Further information about QUANTUM PHOTONICS in Erfurt:
https://www.quantum-photonics.de/en

About Fraunhofer IOF

The Fraunhofer Institute for Applied Optics and Precision Engineering IOF in Jena conducts application-oriented research in the field of photonics and develops innovative optical systems for controlling light - from its generation and manipulation to its application. The institute's range of services covers the entire photonic process chain from opto-mechanical and opto-electronic system design to the production of customer-

specific solutions and prototypes. At Fraunhofer IOF, about 500 employees work on the annual research volume of 40 million euros.

For more information about Fraunhofer IOF, please visit: www.iof.fraunhofer.de

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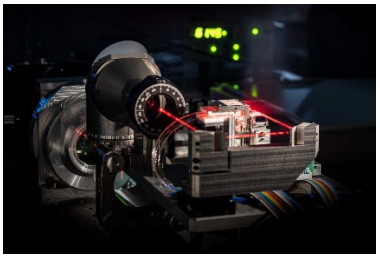
Press images

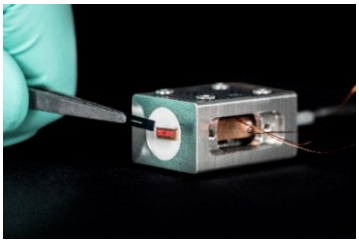
The following images are available in the Fraunhofer IOF press section at https://www.iof.fraunhofer.de/en/pressrelease.html for download.

Quantum Photonics

QUANTUM PHOTONICS provides a platform for exchange between research, industry, and politics on photonic quantum technologies. © Quantum Photonics 2025



Laser-based addressing optics for an ion trap of the next-generation quantum computer being developed as part of AQTION. © Fraunhofer IOF



Fraunhofer IOF develops systems for highly secure quantum communication. Here is a compact photon source optimized for use in space. © Fraunhofer IOF