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German Federal President visits Fraunhofer IOF

Frank-Walter Steinmeier honors futures studies as part of event series "Werkstatt des Wandels" (Workshop of Change)

Jena (Germany)

German Federal President Frank-Walter Steinmeier visited the Fraunhofer Institute for Applied Optics and Precision Engineering IOF in Jena today as part of the event series "Werkstatt des Wandels" (Workshop of Change). He thereby recognized the institute as a place of successful transformation that contributes to new opportunities for society, the economy and industry.

For institute director Andreas Tünnermann the visit is a great honor: "The Federal President's visit at Fraunhofer IOF emphasizes the importance of applied optics and photonics for the future of our society. Through their work, our researchers make an important contribution to the development of new technologies and innovations with the goal of making the lives of all people more sustainable, healthier, and safer in future."

Andreas Tünnermann also looks back with pride on the achievements of his staff members in the last 30 years since the founding of the institute: "Our researchers have already been awarded three times with the ["Deutscher Zukunftspreis" \(German Future Prize\)](#), the German Federal President's award for technology and innovation, for groundbreaking future technologies that are developed at Fraunhofer IOF in cooperation with partners from science and industry."

Shaping digital change and societal transformation

During his visit today in Jena, Fraunhofer IOF researchers presented new technological approaches that address current societal challenges and that will support future transformations in modern living and working environments to the Federal President.

A joint tour of the institute firstly highlighted the topic of human-machine interaction. It is the prerequisite for the use of robots or assistance systems in, e.g., production, but also in medicine and care. In this context, the researchers presented a portable [3D sensor](#) that enables a mobile – and therefore especially efficient – measurement of complex objects. State-of-the-art sensor technology, such as the system presented, will help to support digitalization in, for example, industrial production in the future.

The security of our data in just that digital world was also the topic in quantum communications: With the help of entangled photons, our future communication should

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become practically tap-proof. Here, Fraunhofer IOF works closely with partners from science and industry – for example as part of the [QuNET initiative](#) – to establish new security standards using quantum physics approaches. On top of the development and expansion of a quantum-secured high-security network in Germany with the [central hub in Erfurt](#), the institute also researches the satellite based exchange of quantum keys to create the [basis for a global quantum network](#). In order to further advance research in this field, the [new Fraunhofer IOF research building](#), which is currently under construction, will have its own optical ground station in the future.

Furthermore, the Federal President visited a laboratory for ultra-precision machining. This production process is used, among other things, in the manufacturing of high-precision optics for use in space. Fraunhofer IOF is involved in numerous space missions, especially those that are aimed at observing Earth and thus enable more precise research into climate change. A current example is the German hyperspectral satellite [EnMAP](#). But the exploration of the distant universe is also intended to find answers to questions about our place in the universe. Researchers from Jena are currently involved with the ESA mission [JUICE](#). The mission is focused on researching the moons of Jupiter.

The visit to Fraunhofer IOF concluded with a dialog with international students and junior researchers from the fields of optics and photonics. The discussion emphasized the need for an open-minded culture as the basis for an excellent and internationally competitive research environment.

Series "Werkstatt des Wandels" (Workshop of Change) honors places of successful transformation

Following his visit to Fraunhofer IOF, the Federal President continued his journey to Carl Zeiss AG. In addition, the "Workshop Talks" also took place. Here, experts from science and industry discussed the conditions that must be met for transformation processes in high-tech to become success stories and then presented their findings to the Federal President.

The event series ["Werkstatt des Wandels"](#) (Workshop of Change) focuses on places where successful transformations uncover new opportunities for society. It is the Federal President's event series in cooperation with the BMW Foundation as well as the Carl-Zeiss-Stiftung. It is being implemented in collaboration with the Center for Responsible Research and Innovation at Fraunhofer IAO.

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Further information:

- On event series "[Werkstatt des Wandels](https://www.bundespraesident.de/DE/bundespraesident/schwerpunkte/werkstatt-des-wandels/werkstatt-des-wandels_node.html)" (Workshop of Change):
https://www.bundespraesident.de/DE/bundespraesident/schwerpunkte/werkstatt-des-wandels/werkstatt-des-wandels_node.html
- On technologies for imaging and sensing at Fraunhofer IOF:
<https://www.iof.fraunhofer.de/en/competences/measurement-methods-and-characterization.html>
- On quantum communication technologies at Fraunhofer IOF:
<https://www.iof.fraunhofer.de/en/competences/emerging-technologies/quantum-technologies/Quantum-communication-technologies.html>
- On systems for astronomy and aerospace at Fraunhofer IOF:
<https://www.iof.fraunhofer.de/en/business-fields/optical-components-and-systems/systems-astronomy-aerospace.html>

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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. Around 500 people currently work at the Fraunhofer IOF. The annual research volume amounts to 40 million euros.

For more information about Fraunhofer IOF, please visit: <http://www.iof.fraunhofer.de/>

Press Images

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