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Foundation stone laid for new research building

Fraunhofer IOF gains more space for quantum research

Jena (Germany)

The Fraunhofer Institute for Applied Optics and Precision Engineering IOF is getting a new research building. The additional laboratory and clean room space will create novel possibilities on the Beutenberg Campus in Jena for new research work, especially in important future fields such as quantum technologies. Today, the festive ceremony of laying the foundation stone took place with selected representatives from politics and science.

Innovative ideas need space to develop and grow into great things. With the new extension building, Fraunhofer IOF will gain new laboratories and office space on an area of more than 2,000 m² in the direct vicinity of the institute's previous buildings.

The third extension of the research institute is an important strategic step for its future. The additional laboratory and clean room space will be used in particular to advance relevant future topics such as quantum technologies. A growing volume of research is expected here in the coming years. The institute is already involved in extensive projects on highly secure quantum communications, hardware development for powerful quantum computers, and quantum-based imaging methods, e.g. for medical diagnostics.

Thuringia as a strong location in quantum technologies

"I am impressed by the constant pursuit of new and globally significant technological findings," said Thuringia's Minister President Bodo Ramelow at the ceremony of laying the foundation stone. "Now the field of quantum technologies is coming to the fore. Fraunhofer IOF was and is largely responsible for the fact that Thuringia in general and Jena in particular have developed into a fertile ground for successful cooperation between industry and science and thus into a vibrant center of science in Central Germany. This process and the effort of all those involved command my utmost respect. I am therefore delighted that the construction costs for the new research building can be funded to a large extent from state resources and that we are thus making a contribution to the ongoing development of Jena as a research location," stated the Minister President.

Thuringian Minister for Economics and Science Wolfgang Tiefensee also expects the expansion of the institute to provide strong impetus for research and industry in the Free State of Thuringia: "Thuringia is one of Germany's leading locations in the field of quantum technologies and quantum communications, thanks to Fraunhofer IOF." The

Editorial Notes

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state recognized the potential of quantum technologies early on and has been strategically investing in the development and expansion of its competencies for several years - around Fraunhofer IOF as a central driver of innovation, the minister explained. Including projects already underway, around 35 million euros in funding will flow into quantum research from the state alone until the end of 2024. Most recently, six million euros were provided for the "[Quantum Hub Thüringen](#)", a new competence network of eleven Thuringian research institutions. In addition, there are currently ongoing federal projects worth around 60 million euros, some of which are also coordinated and implemented at Fraunhofer IOF. For example, Fraunhofer IOF is also responsible for coordinating the major [QuNET](#) initiative funded by the German Federal Ministry of Research and Education (BMBF), an initiative to research highly secure quantum communications.

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Successful cooperation between industry and science

Fraunhofer IOF's latest extension costs 23 million euros and is funded in equal parts by the state and the federal government. Dr. Herbert Zeisel, Ministerial Director for Technology-Oriented Research for Innovation at the Federal Ministry of Education and Research, emphasized in particular the knowledge transfer that is driven by the close interaction between science and industry at the institute: "Fraunhofer has become an innovation engine of the German economy. Here in Jena, this success shines exceptionally brightly. Fraunhofer IOF is an example of the region's innovative strength. The Beutenberg Campus is the science center in Thuringia."

Dr. Thomas Nitzsche, Lord Mayor of the city of Jena, also sees the latest construction project as a confirmation of the location and its rich tradition in optics: "The close ties between science and industry are part of the DNA of the city of Jena and are a decisive success of the location. With the expansion of Fraunhofer IOF at the Beutenberg Campus, the Fraunhofer-Gesellschaft is acknowledging the network of science and industry that has formed here in recent years. I thank the Fraunhofer-Gesellschaft for this strengthening of the location. It is beneficial for the city of Jena."

Director Prof. Dr. Andreas Tünnermann is already looking forward to the completion of the extension building planned for 2023: "With our newest research building, we gain important space for the implementation of original ideas in quantum technologies with added values for German and European industry. This is an important strategic step for our institute, as the new building will allow us to synergistically combine the different activities in quantum computing, quantum communications and quantum imaging."

Steady growth since 1992

Founded in 1992, Fraunhofer IOF was initially located in the city center of Jena, in the so-called "Eulenhäus" [Owl House] on Schillerstrasse. For capacity reasons, the institute moved to a new building on the Beutenberg Campus in 2002. In 2011, the first exten-

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sion building was built there. In 2017, the fiber technology center with a fiber drawing tower, which is directly integrated into the building complex, was opened.

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To date, the research institute has experienced steady growth: nearly 420 employees currently work there with passion to make light usable as a versatile tool for the benefit of society, business and industry.

Press images



Fig. 1: Visualization of the new Fraunhofer IOF research building on the Beutenberg Campus in Jena. (Copyright: Heinle, Wischer und Partner Freie Architekten)

The **Fraunhofer-Gesellschaft**, headquartered in Germany, is the world's leading applied research organization. With its focus on developing key technologies that are vital for the future and enabling the commercial exploitation of this work by business and industry, Fraunhofer plays a central role in the innovation process. As a pioneer and catalyst for groundbreaking developments and scientific excellence, Fraunhofer helps shape society now and in the future. Founded in 1949, the Fraunhofer-Gesellschaft currently operates 75 institutes and research institutions throughout Germany. The majority of the organization's 29,000 employees are qualified scientists and engineers, who work with an annual research budget of 2.8 billion euros. Of this sum, 2.4 billion euros is generated through contract research.