

PRESS RELEASE

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Fraunhofer ILT invites industry to join new network for hydrogen technology

Shaping the future together: “Laser in Hydrogen Technology” network

The Fraunhofer Institute for Laser Technology ILT is mobilizing the new “Lasers in Hydrogen Technology” network to help suppliers and users exchange their particular expertise about lasers and photonics for hydrogen technology. In this network, participants can discuss current research and development on laser processes for fuel cells and electrolyzers. Research alliances are also to be formed to accelerate the industrial implementation of hydrogen technology. The Aachen institute has set up a hydrogen laboratory as a platform for developing such laser processes, a location that the project partners can use to rapidly advance the technology and that covers the entire process chain from forming technology to testing the cells.

With green hydrogen, we will operate the entire industry sustainably and shape the energy and mobility transition – on this, science and politics are largely in agreement. If Europe wants to be climate-neutral by 2050, all companies will have to become sustainable sooner or later,” explains Prof. Arnold Gillner, Head of Business Development Research Markets at the Fraunhofer Institute for Laser Technology ILT. “For this reason, we need to think about the role hydrogen can play for companies at an early stage. It is important to be aware of how hydrogen can be integrated into their future plans.”

According to a recent study, the green hydrogen market will grow to a trading volume of 600 million tons and a turnover of 1.4 trillion dollars by 2050. During this time, up to two million new jobs are expected to be created. However, the path to this goal is anything but straight and smooth, as can already be seen today.

Hydrogen Lab

To pave this path, Fraunhofer ILT has set up the Hydrogen Lab, which represents the entire laser-specific process chain as a test field for hydrogen technology. The lab has ideal conditions for optimizing fuel cells from the basics to series production. The Hydrogen Lab’s wide range of technical equipment opens up a variety of possibilities for seamless interdisciplinary collaboration. Furthermore, it provides users with a unique

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space for public projects and industrial collaborations to achieve synergy effects at the highest scientific and technological level.

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With the Hydrogen Lab, Gillner is planning to establish a network on “Lasers in Hydrogen Technology,” which will bring together companies with different expertise, concepts and market approaches. “We are looking for industrial partners, especially small- and medium-sized companies, but also larger companies or institutes,” says the expert. It’s a tempting offer because the joint research and development projects, continuous exchange of know-how and cooperation promise attractive participation in the emerging market.

Innovation network “Laser in Hydrogen Technology”

In the network, Gillner and his team want to initiate market-oriented technical research development projects and put efficient solutions for the hydrogen industry on the market quickly. “The network serves as a platform for communication between companies and R&D partners,” explains Arnold Gillner, adding: “Our network is open to any type of technology. We don’t limit it to photonics or hydrogen.” For example, it is also suitable for companies from the plastics processing or medical technology sectors.

Fraunhofer ILT has already gained experience with several similar networks that have been established as ZIM networks (Central innovation program for SMEs for Zentrales Innovationsprogramm Mittelstand in German). Interested companies or research institutions are welcome to get in touch. One of the first activities of the new network will be to identify the needs of the market, define a roadmap and determine joint R&D activities. It is therefore worth being involved right from the start.

AKL – International Laser Technology Congress

The scientist would like to discuss the network’s goals and approach at AKL’24 in April 2024. The 14th AKL – International Laser Technology Congress will take place in Aachen from April 17 to 19, 2024. With over 500 participants, more than 80 presentations and 50 companies from the laser industry, the event has established itself as the leading forum for applied laser technology in production in Europe, which many also use for networking – increasingly also in networks.

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Image 1:
Prof. Arnold Gillner, Head of Business Development Research Markets at Fraunhofer ILT, is planning the new network "Laser in Hydrogen Technology" and is looking for companies and institutes to rapidly advance hydrogen technology.
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Image 2:
A wide range of laser technology test systems are available in the new 300 square-meter Hydrogen Lab. The systems cover the laser-related production steps along the process chain for manufacturing metallic bipolar plates that are used in fuel cells.
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Image 3:
Fraunhofer ILT already has experience and success with ZIM networks. They serve as a platform exchanging communication and knowledge between companies and R&D partners.
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