

PRESS RELEASE

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Fraunhofer IPM wins two awards at Photonics West

In California, at the world's most important photonics fair, Photonics West, the winners of the renowned Prism Awards were announced on February 6, 2014. Fraunhofer IPM was one of the winners, with two optical systems developed in collaboration with Hübner GmbH & Co. KG, of Kassel, Germany.

In the security category, the T-Cognition terahertz spectrometer was recognized, and the C-Wave optical parametric oscillator won judges over in the scientific laser category. Both systems were developed jointly by Fraunhofer IPM and Hübner GmbH & Co. KG. The Prism Awards are one of the most important international scientific prizes for modern photonics applications.

"This dual success is an especially impressive example of productive collaboration between research and industry," says Karsten Buse, head of the Fraunhofer IPM institute, "The T-Cognition system shows that, while still quite young, terahertz technology is now ripe for industrial application. And with the C-Wave variable laser light source, the partners succeeded in creating a true world first in the laser technology field!"

T-Cognition: Terahertz spectrometer for monitoring postal mail

The T-Cognition terahertz spectrometer is an automated system for spotting hidden drugs and explosives in letters and small packages. Within a few seconds, T-Cognition identifies concealed substances using their characteristic spectroscopic fingerprint. This security check is done without the need to open the letters or parcels, thus respecting the privacy of mail. In this way, T-Cognition enhances security in mailrooms, penal institutions, customs stations or exposed facilities, such as embassies.

C-Wave: Continuous laser light throughout the visible spectral range

Optical parametric oscillators (OPOs) are ideal light sources for spectroscopy. C-Wave is the first available OPO that emits laser light over the entire visible spectral range and thereby sends continuous light. This has many practical advantages: For one thing, it does away with the need to change laser media or components. In contrast to dye lasers, the solid-state C-Wave requires no exchange of toxic dyes. The one-year cooperation between the Laboratory of Optical Systems at Freiburg University, Fraunhofer IPM and Hübner GmbH & Co. KG has led to an award-winning commercial product.

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Background – Prism Awards

The Prism Awards are one of the most important international scientific prizes for modern photonics applications. Since 2008, they have been awarded by SPIE, an international society for optics and photonics. The winners were announced on February 6 at the world's most important photonics trade show, Photonics West, in California. For further information:

www.photonicsprismaward.com

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Background – Hübner GmbH & Co. KG

Whenever you ride in a bus, train or car, you encounter Hübner products — worldwide. As a system provider, HÜBNER makes products for the transportation industry, medical technology and quality-of-life sector. Their product range includes design and production of folding bellows, vehicle articulation and gangway systems, window systems, PUR molded foam components, and products made of rubber and injection molded plastic. At their headquarters in Kassel and 11 other international sites, more than 1,900 employees bring custom solutions to life — from development, to prototype to marketable product. With its research into terahertz and laser technologies, HÜBNER has advanced into completely new markets. For further information:

www.hubner-germany.com



Keeping mail confidential: T-Cognition identifies concealed drugs and explosives in letters or small packages with no need to open them. © Hübner GmbH & Co. KG.

For print-quality color images: www.ipm.fraunhofer.de.



A new laser source: C-Wave is the first available optical parametric oscillator that continuously emits laser light over the entire visible spectral range. © Hübner GmbH & Co. KG.

For print-quality color images: www.ipm.fraunhofer.de

Die **Fraunhofer-Gesellschaft** ist die führende Organisation für angewandte Forschung in Europa. Unter ihrem Dach arbeiten 66 Institute an Standorten in ganz Deutschland. Mehr als 23 000 Mitarbeiterinnen und Mitarbeiter bearbeiten das jährliche Forschungsvolumen von 2 Milliarden Euro. Davon fallen 1,6 Milliarden Euro auf den Leistungsbereich Vertragsforschung. Über 70 Prozent dieses Leistungsbereichs erwirtschaftet die Fraunhofer-Gesellschaft aus Aufträgen der Industrie und öffentlich finanzierten Forschungsprojekten. Internationale Niederlassungen sorgen für Kontakt zu den wichtigsten gegenwärtigen und zukünftigen Wissenschafts- und Wirtschaftsräumen.

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