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Press release

LOPEC 2024: Printed electronics serving patients

- **Focus topic Smart Living: innovations for the healthcare industry**
- **Printed sensors relieve healthcare professionals**
- **Organ-on-a-chip: better performance with printed electronics**

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LOPEC, the world’s leading exhibition and conference for flexible, organic and printed electronics, will be held in Munich from March 5 to 7, 2024.

Under the focus topic of Smart Living, companies and researchers will show how printed electronics is making the health sector fit for the future.

Visitors to LOPEC 2024 can look forward to a wide range of innovations. “The high number of new exhibitors and the generally good booking situation show that printed electronics is increasingly moving toward specific industrial applications and everyday products,” says Armin Wittmann, Exhibition Director of LOPEC. One focus is on innovations in the health sector. “Printed electronics devices are so thin, light, flexible, and reliable that they open up unimagined possibilities for medical technology,” explains Dr. Klaus Hecker, Managing Director of the LOPEC co-organizer OE-A (Organic and Printed Electronics Association), an international working group within VDMA.

Wearables for health monitoring

The sensor socks from LOPEC exhibitor Metafas, for example, support the care of people with health impairments who have difficulty expressing their needs. Printed sensors in the socks measure skin conductance, which depends primarily on sweat secretion. Through an AI-supported evaluation, the socks detect whether a patient is feeling well or stressed. Application shows that socks are better accepted than sensors affixed to the skin. They are also washable and hence more sustainable. Alongside Metafas, there are many other LOPEC

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exhibitors involved in printed electronics for health monitoring and the required materials, including Covestro, Henkel, Heraeus, IEE, and InnovationLab.

Smart labels for more security

Electronic labels for packaging and devices are also increasingly gaining ground in the healthcare sector. With RFID, NFC and Bluetooth technology they enhance brand protection and patient safety. Such labels can automatically document the administration of a medicine and moreover allow better monitoring of the supply chain. LOPEC exhibitor Witte Technology offers digital seals as well. Via ultra-fine printed electronic loops, they register product manipulations, which they report to the smartphone via an NFC interface.

Research highlights

In addition to successful applications of printed electronics, LOPEC is presenting groundbreaking innovations from research. Thanks to printed electronics, organ-on-chip systems, for example, aimed at replacing animal testing, have become an unbeatable tool for accelerating drug discovery and drug development. Scientists from the Dutch Holst Centre are working on such chips. Other research institutions presenting at LOPEC include VTT Technical Research Centre Finland, Austria's Joanneum Research Forschungsgesellschaft, Portugal's CeNTI – Centre for Nanotechnology and Smart Materials, and, from Germany, several Fraunhofer Institutes and the Leibniz Institute for New Materials. Research highlights can also be found at the LOPEC Conference. For example, Bernd Grimm of the Luxembourg Institute of Health will give a plenary talk on printed sensors in orthopedic rehabilitation.

Essential for the digital future

In addition, under the focus topic of Smart Living, LOPEC will present innovations for the sports and entertainment sector, and for sustainable energy and building technology. "Printed electronics literally makes our lives lighter and is essential for the digitalization of society," Hecker points out. Wittmann stresses that its potential is far from exhausted: "We are pleased that LOPEC is helping to reduce the time-to-market for this sustainable technology." The diverse program

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is aimed at both printed electronics newcomers and insiders, and covers the entire value chain from material development and printing systems, to the end product.

The next LOPEC takes place in Munich from March 5-7, 2024 (exhibition: March 6 and 7, 2024). You can find the preliminary list of exhibitors [here](#).

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LOPEC

LOPEC (Large-area, Organic & Printed Electronics Convention) is the world's leading event for printed electronics. The combination of exhibition and conference covers the complexity and dynamism of this young industry perfectly. LOPEC is organized jointly by the OE-A (Organic and Printed Electronics Association) and Messe München GmbH. The next event will take place from March 5-7, 2024, at the ICM – Internationales Congress Center München. www.lopec.com

Messe München

Messe München is one of the leading exhibition organizers worldwide with more than 50 of its own trade shows for capital goods, consumer goods and new technologies. Every year, about 50,000 exhibitors and around 3 million visitors take part in more than 200 events at the exhibition center in Munich, at the ICM – Internationales Congress Center München, the Conference Center Nord and the MOC Veranstaltungszentrum München, and also abroad. Together with its subsidiary companies, Messe München organizes trade fairs in China, India, Brazil, South Africa and Turkey. With a network of associated companies in Europe, Asia and South America, and with around 70 representations abroad for more than 100 countries, Messe München has a global presence.

OE-A

The OE-A (Organic and Printed Electronics Association) is the world's leading industrial association for flexible, organic and printed electronics. It represents the entire value chain of this industry. Its members are world-leading companies and institutions, from research and development institutes to, mechanical engineers and material manufacturers to producers and end users. More than 200 companies from Europe, Asia, North America, and Africa work together in the OE-A to further advance the development of a competitive infrastructure for the production of flexible and printed electronics. OE-A is an international working group within VDMA.

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