

Munich, November 28, 2022

## Press release

### LOPEC 2023

## Sustainably connected with Printed Electronics

- **Focus topic Smart Living: new applications for medicine and sports**
- **Internet of Things as a growth driver**
- **More sustainability thanks to green electronics**

**LOPEC, the world's leading exhibition and conference for flexible, organic and printed electronics, will be held in the ICM at Messe München from February 28 to March 2, 2023. Visitors can look forward to a significant number of applications from the Smart Living segment.**

Printed electronics is so thin, lightweight, and flexible that the technology is an enabler for many high-tech applications in the first place. For example, for the mega trend of Smart Living, which is right at the top of the LOPEC 2023 agenda, as Dr. Klaus Hecker, Managing Director of the LOPEC co-organizer OE-A (Organic and Printed Electronics Association), an international working group within VDMA, explains: "At LOPEC, we can see how flexible and printed electronics is not only increasingly gaining ground in consumer electronics and for buildings, but also in medicine and the sports sector."

### Printed electronics serving health

Printed electronics is ideal for wearable medical products that make monitoring patients and hence also telemedicine easier. The LOPEC exhibitors Henkel and Quad Industries have already developed a Covid-19 patch. It lightens the workload for hospital staff and at the same time allows patients to be discharged sooner whose health status can also be monitored at home thanks to the patch. Printed sensors integrated in the wearable form the basis for the remote monitoring of heart rate, breathing and body temperature. The vital signs are

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wirelessly transmitted to a cloud, where they can be accessed by medical staff. The concept is now to be expanded to include patients with cardiovascular diseases and epilepsy. Henkel will be presenting conductive inks and other material innovations for applications like these at LOPEC.

Athletes also benefit from patches and shirts with a monitoring function. Organic electronics now additionally opens up a new option for electrical muscle stimulation (EMS). Using a conductive polymer from LOPEC exhibitor Heraeus Epurio, the Japanese company AI Silk has developed textile electrodes that are already on the market in Japan in EMS fitness suits. They stimulate muscle growth without causing severe tingling. The conductive textiles are certified according to the Standard 100 by Oeko-Tex and endure numerous washing cycles. The technology from Heraeus Epurio can also be used to manufacture VR wearables with integrated sensor technology and haptic feedback that produce a tactile sensation on the skin just like touching a real object.

The question of providing energy for applications like these is not being ignored at LOPEC either. In addition to printed batteries, Varta will also be showing other microbatteries in Munich for smart applications in a wide range of areas from medical diagnostics to the measurement and sensor technology for tomorrow's connected world. Rainer Hald, CTO at Varta, will give insights about the mass production of printed batteries in his plenary talk at the LOPEC Conference.

### **Internet of Things as a growth driver**

Alongside the automotive and construction industries, the health sector and consumer electronics are the most important target markets for printed electronics. "Despite the difficult global situation, we expect a 13-percent increase in sales this year for flexible and printed electronics, and, according to our latest Business Climate Survey, our member companies even expect a 24-percent increase for next year," says OE-A Managing Director Dr. Hecker.

One of the growth drivers is the Internet of Things (IoT). Thanks to printed electronics that can be integrated seamlessly, there are no longer any limits to

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the interconnection of all physical and virtual objects and individuals. In their plenary talks at the LOPEC Conference, Max Morwind, IoT expert at Microsoft, and Katariina Penttilä, Technology Manager at Avery Dennison Intelligent Labels, will emphasize the huge importance of printed electronics for IoT.

### **Reducing the ecological footprint**

In addition, LOPEC is focusing more and more on the topic of sustainability. Since printed electronics is lightweight and thinner than conventional electronics, it saves material resulting in more resource efficient products. The Israeli startup Copprint will be presenting another approach. Its nano copper inks offer a cost-effective and at the same time environmentally friendly alternative to conventional silver inks. Electronics printed on paper are therefore completely biodegradable. “Smart Living also means that we reduce our ecological footprint. For that, we need printed electronics,” says Dr. Hecker.

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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 February 28 to March 2, 2023, at the ICM – Internationales Congress Center München.

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### **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, Russia, South Africa, Turkey and Vietnam. 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. Many 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.

[www.oe-a.org](https://www.oe-a.org)