

02

Munich, October 10, 2017

## Press Release

### LOPEC 2018 in Munich, Germany

### 3D-printed circuits and more

**Printed electronics and 3D-printing systems are coming together and enabling new applications. The current state of this technology and its potential are a hot topic at LOPEC, the international exhibition and conference for the printed-electronics industry, which will be held from March 13 to 15, 2018, at the Messe München exhibition grounds.**

Printed electronics is about to enter the third dimension: Circuits and much more will no longer be printed simply on foil and other flat surfaces. They will also be integrated into three-dimensional objects. “3D-printed electronics are an emerging market,” says Dr. Takao Someya, a professor at the University of Tokyo and a member of the LOPEC’s Scientific Board. “New printing technology can be used to place electronic functions on both the surfaces of complex components and integrate them inside the components as well.” All questions regarding 3D-printed electronics will be answered at the LOPEC from March 13 to 15, 2018 in Munich, Germany.

In his keynote address to the LOPEC Congress 2018, Someya will present a conductive printing ink made of an elastomer that contains nano-silver particles. The material can be stretched to as much as five times its original length without losing any of its electric properties. In their work, Japanese researchers have produced elastic printing and temperature sensors that can be laminated onto arbitrarily shaped objects and textiles.

### Applications and product examples of 3D-printed electronics

LOPEC exhibitor Neotech AMT of Nuremberg offers systems that print conductor tracks and other electrically active structures directly onto 3D components. The consumer electronics and automotive industries use this technology to print antennas and heating elements on curved plastic surfaces, among other things.

Press Contact  
Messe München GmbH  
Isabella Lauf  
Tel. +49 89 949-21487  
isabella.lauf@  
messe-muenchen.de

Press Contact OE-A  
Sophie Verstraelen  
Press & Public Relations  
Tel. +49 69 6603 1896  
sophie.verstraelen@oe-a.org  
oe-a.org

Messe München GmbH  
Messegelände  
81823 München  
Germany  
messe-muenchen.de

**Press Release** | October 10, 2017 | 2/2

Many industries are eagerly awaiting 3D printers that create objects layer by layer and integrate electronic elements while doing so. With the help of several print heads, these printers can combine a number of plastics or even metal with plastic or ceramics. Researchers at the Fraunhofer Institute for Manufacturing Technology and Advanced Materials (IFAM) have printed a combination of conventional and electrically conductive plastics to create conductor tracks within plastic objects. The OE-A member (Organic and Printed Electronics Association) will also be represented at LOPEC. One of the challenges posed by 3D-multimaterial printing is the tempering of the various materials. Printing inks that contain metal particles must usually undergo a high-temperature treatment to form their electric properties. LOPEC exhibitor NovaCentrix of the United States has developed a solution that flashes extremely short bursts of pulsed light onto the printed metal structure. This process can be used on heat-sensitive plastics without causing any damage.

### **Revolutionary duo: 3D printing and printed electronics**

Decentralized, individual and cost efficient – these are the strengths of 3D printing. In the future, spare parts should be able to be printed everywhere at the press of a button, even in outer space. LOPEC exhibitor Optomec of the United States has been contracted by the U.S. space agency NASA to develop a 3D printer that can make electronics in space

Printed electronics has already become an integral part of the aviation industry. Sensors, light-emitting diodes and other elements made with state-of-the-art printing technologies are already being used in planes. “Up to now, we have only been printing two dimensionally on flat surfaces,” Takao Someya says. “This limitation is now a thing of the past.” In the future, supplemental electronic functions will be integrated into all possible products almost effortlessly. The combination of printed electronics and 3D-printing will revolutionize industrial production in every sector. LOPEC 2018 will offer insights into the electronics of the future.

**More information about LOPEC can be found at: [www.lopec.com](http://www.lopec.com)**

**Press Release** | October 10, 2017 | 3/3

[Photos](#) in print quality and [film material](#) are available free of charge.

**Press Release | October 10, 2017 | 4/4**

### **LOPEC**

LOPEC (Large-area, Organic & Printed Electronics Convention) is the leading international event for printed electronics. The combination of an exhibition and a conference is the perfect way to depict the complex and dynamic nature of this young industry. 2,585 participants from 50 countries attended the event in 2017. There were 154 exhibitors from 17 countries, and 182 conference presentations from 22 countries. LOPEC is organized jointly by the OE-A (Organic and Printed Electronics Association) and Messe München GmbH. The next event takes place from March 13 to 15, 2018 at the ICM – Internationales Congress Center München in Munich, Germany.

[www.lopec.com](http://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, a total of over 50,000 exhibitors and around three million visitors take part in more than 200 events at the exhibition center in Munich, at the ICM – Internationales Congress Center München and the MOC Veranstaltungszentrum München as well as abroad. Together with its subsidiary companies, Messe München organizes trade shows in China, India, Brazil, Russia, Turkey, South Africa, Nigeria, Vietnam and Iran. With a network of associated companies in Europe, Asia, Africa and South America as well as around 70 representations abroad for over 100 countries, Messe München has a global presence.

### **OE-A**

The OE-A (Organic and Printed Electronics Association) was founded in December 2004 and is the leading international industry association for organic and printed electronics. The OE-A represents the entire value chain of this industry. The members are world-class global companies and institutions, ranging from R&D institutes, mechanical engineering companies and material suppliers to producers and end-users. Well over 200 companies from Europe, Asia, North America, South America, Africa and Oceania are working together to promote the establishment of a competitive production infrastructure for organic and printed electronics. The OE-A is building a bridge between science, technology and application. The OE-A is a working group within VDMA.

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