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Cooperative effort between the Fraunhofer FEP and its industrial partner MICROOLED S.A.S. wins Franco-German business award

In her video interview for the Franco-German award in business (Deutsch-Französischen Wirtschaftspreis), German journalist Annette Gerlach describes the Franco-German collaboration as being like camembert on pumpernickel – the bringing together of characteristic ingredients from both countries to achieve a successful result. The partners – Fraunhofer FEP and MICROOLED – can likewise look upon this with pleasure at having nominated the Franco-German business award.

MICROOLED

The goal of the Franco-German award in business awarded by the Franco-German chamber of industry and commerce is to highlight collaborative efforts between French and German enterprises. Symbolizing Franco-German cooperation, the prize is awarded for "best practices" in four categories: Environment, Climate and Energy; Innovation, New Technologies, and Industry 4.0; and Industrial Collaboration/Start-Ups.

MICROOLED started as a start-up out of from CEA-LETI and Thomson back in 2007 and since that time has become one of the world's leading suppliers of high-performance near-to-eye displays for near-to-the eye visualisation e.g. in electronic viewfinders, head-mounted displays, Augmented Reality glasses etc. The Fraunhofer FEP Dresden for its part can already look back on more than a decade of experience in research and development on OLED microdisplays.

MICROOLED and Fraunhofer have been working together already for several years in European funded projects in the field of design and technology of microdisplays. Since 2015, they started a bilateral collaboration on the development of a new type of microdisplay with ultra-low power consumption, about 100× lower compared to the state-of-the-art, based on an existing prototype at Fraunhofer. This new microdisplay has been transferred to the manufacturing line of MICROOLED located in Grenoble/ France and is in production today.

The ultra-low-power microdisplay is based on a new concept integrating a memory function into the pixels and a new driving concept based on a differential update of information. This new approach allows to reduce power consumption of the display from typically 200 mW down to 2–3 mW. In addition, power consumption not only of the display, but also of the whole transmission chain is considerably reduced, enabling

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the realisation of extremely compact and lightweight wearable products like smartglasses or Augmented Reality systems.

"One of the factors for the success of the Franco-German joint project is the know-how developed by each of the project partners over many years. At Fraunhofer, we already had a verified design concept as well as having developed and presented various prototypes of this microdisplay. This convinced MICROOLED, and was the kick-off for our project", explains Dr. Uwe Vogel, head of the Fraunhofer FEP Microdisplays and Sensors division.

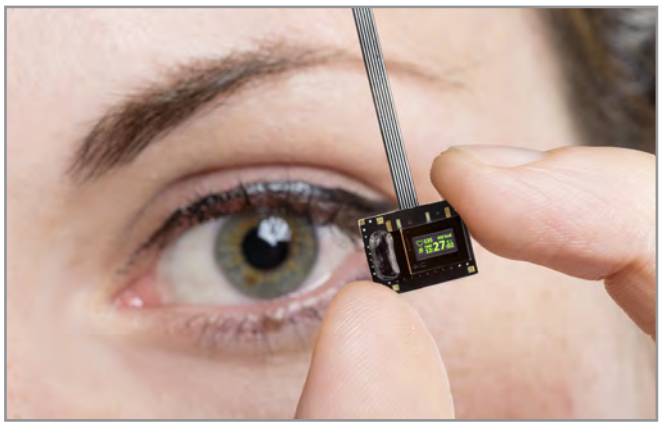
Dr. Gunther Haas, Co-Founder and Chief Technology Officer of MICROOLED, adds: "The joint experience we developed over the long-term through research projects funded by the European Commission provided a good basis for successful cooperation, such as in the current LOMID project for developing large surface area OLED microdisplays (grant agreement No. 644101). Moreover, MICROOLED has acquired years of product development and manufacturing expertise, as well as extensive international marketing experience which are both essential ingredient for successfully introducing new microdisplay components to the market."

Both partners agree: "Last but not least, our trust in one another combined with the extremely close cooperation and communication led to the success of the project." The two partners prepared their entry for the Franco-German business award through this cooperation. The jury, which consisted of the President of the Franco-German chamber of industry and commerce journalists of the Handelsblatt, and prestigious representatives from universities and industry, have chosen the collaboration between nominees Fraunhofer FEP and MICROOLED as winner of prize in the New Technologies and Industry 4.0 category.

Dr. Gunther Haas accepted the award with great pleasure at the awards ceremony in Paris on December 11, 2017. He commented: "We are extremely pleased about this distinction and accept it on behalf of all of our colleagues who participated as recognition of our joint work. It will spur us on to future projects for transferring Fraunhofer technologies to the market."

More information:
www.francoallemand.com/veranstaltungen/deutsch-franzoesischer-wirtschaftspreis

About MICROOLED
www.microoled.net



Ultra-low-power display
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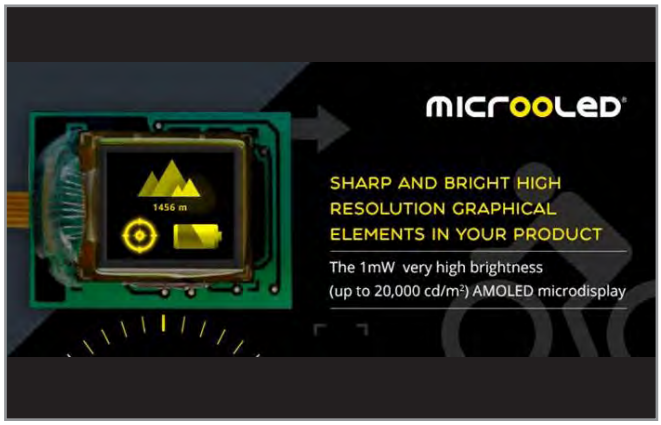
Picture in printable resolution: www.fep.fraunhofer.de/press



Incorporation of the ultra-low-power displays in data glasses
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The **Fraunhofer Institute for Organic Electronics, Electron Beam and Plasma Technology FEP** works on innovative solutions in the fields of vacuum coating, surface treatment as well as organic semiconductors. The core competences electron beam technology, sputtering and plasma-activated deposition, high-rate PECVD as well as technologies for the organic electronics and IC/system design provide a basis for these activities. Thus, Fraunhofer FEP offers a wide range of possibilities for research, development and pilot production, especially for the processing, sterilization, structuring and refining of surfaces as well as OLED microdisplays, organic and inorganic sensors, optical filters and flexible OLED lighting. Our aim is to seize the innovation potential of the electron beam, plasma technology and organic electronics for new production processes and devices and to make it available for our customers.