



Press Release

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**FOR IMMEDIATE RELEASE**

**UNIVERSAL DISPLAY UNVEILS NOVEL SINGLE-LAYER  
ENCAPSULATION TECHNOLOGY FOR OLED AND OTHER  
THIN-FILM DEVICES**

*Introduction of new barrier film technology may also accelerate commercialization of high-performance plastic substrate systems*

**Ewing, New Jersey – April 18, 2011** – [Universal Display Corporation](#) (NASDAQ: PANL), enabling energy-efficient displays and lighting with its [UniversalPHOLED<sup>®</sup>](#) technology and materials, today unveiled a novel, single-layer encapsulation technology for plastic substrate systems and thin-film devices, including rigid and flexible OLED displays and lighting panels. The company announced the advances at the [Society of Vacuum Coaters Technology Conference](#) at the Hyatt Regency Chicago on the Riverwalk in Chicago, IL, being held April 16-21, 2011.

Details of the new thin-film encapsulation technology were delivered today by Dr. Ruiqing Ma, Department Manager, Flexible OLED Displays, at Universal Display, in a paper titled “*Technical Gap Analysis of Vacuum Coated Materials for Flexible OLED Display and Lighting Applications.*” Developed in collaboration with research partner Princeton University, Universal Display’s single, hybrid organic-inorganic layer approach has been demonstrated successfully as an encapsulant for flexible and rigid OLED devices.

The encapsulation layer provides an effective permeation barrier to protect thin-film devices from environmental conditions, such as moisture and oxygen, which is critical

for the long-term performance of OLED display and lighting products. Using environmentally-benign and non-toxic materials in a potentially low-cost process, the barrier film technology may also be well suited for high-performance plastic substrate systems and other thin-film devices, such as photovoltaics and batteries.

“Our novel single-layer encapsulation technology is an elegant solution to improve the manufacture and performance of OLEDs and a range of other thin-film devices,” stated Steven V. Abramson, President and Chief Executive Officer of Universal Display. “Our approach relies on a single, hybrid organic-inorganic layer that is applied using a cost-effective process. This film creates a very strong permeation barrier to address the strict packaging requirements of these devices. In addition to providing benefit for OLED and other thin-film products in the market today, this approach may also accelerate the commercialization of emerging flexible OLED displays and lighting products, as well as the plastic substrate systems that are used to produce them.”

Demonstration of this encapsulation technology has been supported, in part, under National Science Foundation, U.S. Department of Defense and U.S. Department of Energy Small Business Innovation Research contracts. Universal Display has been working with the U.S. Army Research Laboratory and the Flexible Display Center (FDC) at Arizona State University to demonstrate the technology’s effectiveness for flexible OLED display prototypes based on Universal Display’s phosphorescent and other OLED technologies and the FDC’s flexible backplane technologies.

Universal Display is the recognized leader in high-performance, energy-efficient phosphorescent OLED technology and materials, as well as related OLED technologies that deliver manufacturing and device performance advantages. With a comprehensive patent portfolio and technical expertise that covers these and other OLED technologies worldwide, Universal Display licenses its state-of-the-art OLED technologies, sells its proprietary UniversalPHOLED materials, and provides customized technology development and transfer services for its OLED display and lighting customers.

To see how Universal Display is changing the face of the display and lighting industries, please visit the company at [www.universaldisplay.com](http://www.universaldisplay.com).

### **About Universal Display Corporation**

Universal Display Corporation (Nasdaq: PANL) is a leader in developing and delivering state-of-the-art, organic light emitting device (OLED) technologies, materials and services to the display and lighting industries. Founded in 1994, the company currently owns or has exclusive, co-exclusive or sole license rights with respect to more than 1,000 issued and pending patents worldwide. Universal Display licenses its proprietary technologies, including its breakthrough high-efficiency UniversalPHOLED<sup>®</sup> phosphorescent OLED technology, that can enable the development of low power and eco-friendly displays and white lighting. The company also develops and offers high-quality, state-of-the-art UniversalPHOLED materials that are recognized as key ingredients in the fabrication of OLEDs with peak performance. In addition, Universal Display delivers innovative and customized solutions to its clients and partners through technology transfer, collaborative technology development and on-site training.

Based in Ewing, New Jersey, Universal Display works and partners with a network of world-class organizations, including Princeton University, the University of Southern California, the University of Michigan, and PPG Industries, Inc. The company has also established relationships with companies such as AU Optronics Corporation, Chimei Innolux Corporation, DuPont Displays, Inc., Konica Minolta Technology Center, Inc., LG Display Co., Ltd., Moser Baer Technologies Inc., Samsung Mobile Display Co, Ltd., Seiko Epson Corporation, Sony Corporation, Showa Denko K.K., and Tohoku Pioneer Corporation. To learn more about Universal Display, please visit [www.universaldisplay.com](http://www.universaldisplay.com).

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