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## Universal Display Announces Significant Advances in Solution-Processible Phosphorescent OLED Material Systems for Potential Low-Cost OLED Manufacturing

EWING, N.J.--([BUSINESS WIRE](#))--[Universal Display Corporation](#) (NASDAQ:PANL), enabling energy-efficient displays and lighting with its [UniversalPHOLED®](#) technology and materials, announced today significant advances in the performance of its [UniversalP2OLED™](#) solution-processible, phosphorescent OLED material systems for use with solution-based manufacturing processes. Display and lighting manufacturers are evaluating solution-based manufacturing techniques as an additional path for the cost-effective production of large-area OLED displays and lighting devices. These developments were announced during the [10th International Meeting on Information Display](#) (IMID 2010), being held from October 11 to 15, 2010 at the KINTEX in Ilsan, Gyeonggi, Korea.

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In a paper delivered today, Dr. Kwang Ohk Cheon, Senior Research Scientist at Universal Display, reported that the performance of Universal Display’s solution-processible P2OLED technology and materials have advanced significantly through the continued development of enhanced materials and device structures using its proprietary solution-processed, small-molecular emitter systems. These systems are now approaching the performance of PHOLEDs made by vacuum-evaporated techniques.

During his talk, Dr. Cheon reported on a new green system with 66 candelas per Ampere (cd/A) and 130,000 hours of operating lifetime to 50% of an initial luminance of 1000 nits - representing approximately a two times improvement in luminous efficiency and lifetime over Universal Display’s results reported a year ago. In addition, the company’s red P2OLED system now offers 15 cd/A and 62,000 hours, and its light blue P2OLED offers 18 cd/A and 5,000 hours. These results are achieved without using any burn-in or pre-aging methods.

Through the development of optimized ink formulations, the company has also demonstrated ink-jet printed P2OLED devices with comparable performance to devices made by spin-coating. While spin coating is a technique generally only used for research purposes, ink-jet printing is one of the leading solution-processing candidates for use in large-area manufacturing settings.

“The recent performance advances of our solution-processed, phosphorescent OLED material systems, achieved by our Universal Display team, represent significant progress over the past year,” said Steven V. Abramson, President and Chief Executive Officer of Universal Display. “Universal Display’s highly energy-efficient PHOLED technology and materials are already considered to be critical to the manufacture of OLED displays and lighting produced by vacuum-based manufacturing processes today. These recent P2OLED results move us a major step closer to enabling the industry to produce energy-efficient OLED displays and lighting devices on larger-area manufacturing platforms by cost-effective, solution-processing manufacturing methods.”

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™ 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., 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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