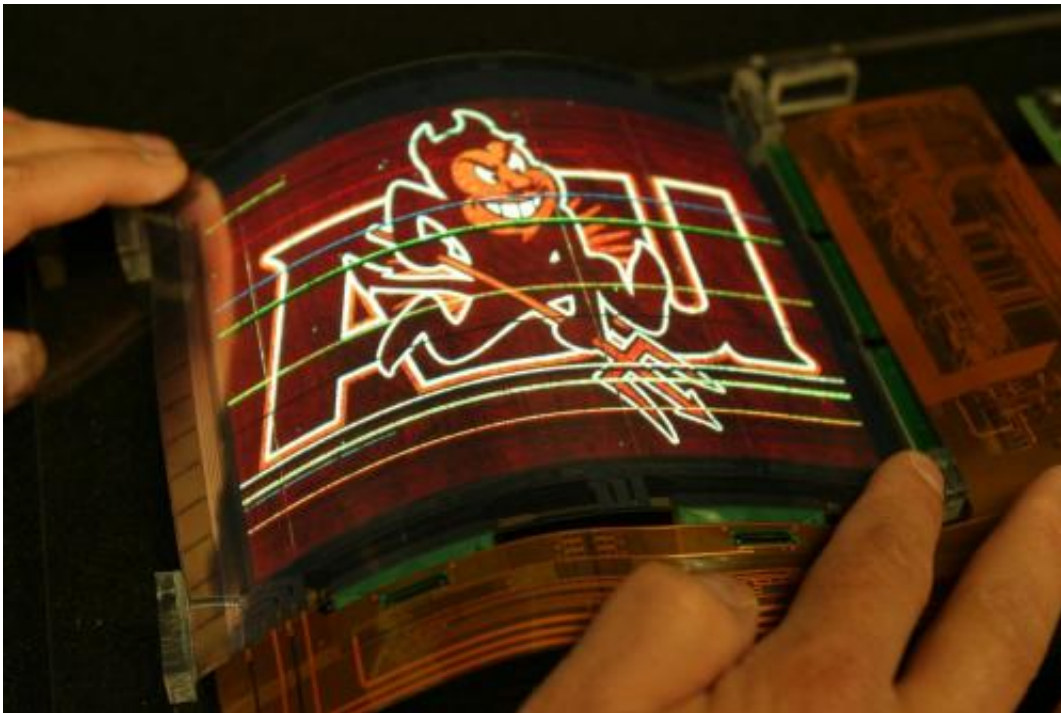


# Largest flexible color organic light emitting display produced

June 4 2012

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Researchers at the Flexible Display Center at ASU have successfully manufactured the world's largest flexible color organic light emitting display prototype using advanced mixed oxide thin film transistors. Photo by: Jann Kaminski, ASU

(Phys.org) -- The Flexible Display Center at Arizona State University announced that it has manufactured the world's largest flexible color organic light emitting display (OLED) prototype using advanced mixed oxide thin film transistors (TFTs). Measuring 7.4 diagonal inches, the

device was developed at the FDC in conjunction with Army Research Labs scientists. It also meets a critical target set by the U.S. Department of Defense to advance the development of full-color, full-motion video flexible OLED displays for use in thin, lightweight, bendable and highly rugged devices.

“This is a significant manufacturing breakthrough for flexible display technology,” said Nick Colaneri, director of the Flexible Display Center. “It provides a realistic path forward for the production of high performance, flexible, full color OLED displays, accelerating commercialization of the technology in the process.”

Mixed oxide TFTs offer a highly cost-effective approach for manufacturing displays that deliver high performance, including vibrant colors, high switching speeds for video and reduced power consumption. Furthermore, mixed oxide TFTs can be manufactured on existing amorphous silicon production lines, eliminating the need for specialized equipment and processing, thereby reducing costs compared to competitive approaches.

“One of the primary directives of the Flexible Display Center has been to pursue approaches to flexible technologies that take advantage of existing manufacturing processes,” continued Colaneri. “This focus drove us to pursue a flexible, color display based on mixed-oxide TFTs, which are widely regarded as a strong, cost-effective alternative to low-temperature polysilicon. This display showcases the Center’s successful scale up to GEN II, and our ability to produce displays using mixed-oxide TFTs in standard process flows with our proprietary bond/de-bond technology.”

The new, full-color OLED display will be on display in the FDC booth #643 at SID Display Week, June 5-7, at the Boston Convention and Exhibition Center in Boston, Mass.

**More information:** [flexdisplay.asu.edu/](http://flexdisplay.asu.edu/)

Provided by Arizona State University

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