



Applied Materials Introduces Advanced CVD Films to Enable Metal Oxide-Based High Resolution Displays

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- **Screens in tablets and TVs moving to metal oxide technology for higher performance**
- **New AKT-PECVD films provide a cost-effective path for bringing metal oxide backplanes rapidly to market**

SHANGHAI, China, March 20, 2012 - Applied Materials, Inc. today announced new [PECVD](#) film technology to produce higher-performance, high-resolution displays for next-generation tablet computers and TVs. Available on Applied's industry-leading [AKT-PECVD](#) system, these advanced insulating films enable the use of metal oxide-based transistors that produce smaller, faster-switching pixels to create higher resolution screens preferred by consumers.

Applied's new PECVD films provide a [dielectric](#)-layer interface for metal oxide transistors that minimizes hydrogen impurities to improve transistor stability and deliver optimized screen performance. These high-quality silicon oxide (SiO₂) films can be deposited by the AKT-PECVD system with precise uniformity on sheets of glass up to 9m² in size - a capability that is critical to achieving high production yields and low manufacturing costs.

"Display makers are aggressively investing in metal oxide transistor capability, and our advanced PECVD films overcome the uniformity and stability challenges of these complex dielectric films, clearing a major hurdle to implementing this important new technology," said [Tom Edman](#), group vice president and general manager of Applied's AKT [Display Business Group](#). "By extending the capabilities of our world-class AKT-PECVD system to dielectric film deposition for metal oxide, Applied has provided a rapid, cost-effective path to help bring this technology to market. Customers have had excellent results with these new films on our system and we are seeing strong demand from major display manufacturers for upgrades and new systems."

In addition to its new PECVD films, Applied is currently developing advanced [PVD](#) solutions, including [IGZO](#) deposition, for metal oxide manufacturing. Using its latest rotary cathode array technology, Applied is demonstrating highly-uniform, homogeneous and low-defect, active-layer deposition at higher productivity rates and lower material consumption costs than currently available PVD solutions.

Applied Materials will showcase its solutions for metal oxide, thin film transistor liquid crystal display manufacturing at [FPD China 2012](#) from March 20-22 in Shanghai. To learn more about Applied's activities at the show, visit www.appliedmaterials.com/newsroom/events/semicon-china-2012.

Applied Materials, Inc. (Nasdaq:AMAT) is the global leader in providing innovative equipment, services and software to enable the manufacture of advanced semiconductor, flat panel display and solar photovoltaic products. Our technologies help make innovations like smartphones, flat screen TVs and solar panels more affordable and accessible to consumers and businesses around the world. At Applied Materials, we turn today's innovations into the industries of tomorrow. Learn more at www.appliedmaterials.com.

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Photo Caption: Applied Materials' world-class AKT-PECVD systems deposit the critical dielectric films that are enabling the transition to metal oxide-based high resolution displays.

[Photo](#)

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