



Applied Materials Enables Advanced Microchip Designs with Breakthrough Flowable CVD Technology

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- Eterna FCVD system solves one of the most critical challenges in scaling Moore's Law
- Isolates densely-packed features at 20nm node, filling gaps with over 30:1 aspect ratios
 - Eterna FCVD process is industry's most cost-effective gap-fill solution
- Live webcast today at 1:00 p.m. PDT on http://www.appliedmaterials.com/2010_SSG/

SANTA CLARA, Calif., Aug 24, 2010 (BUSINESS WIRE) --

Applied Materials, Inc. today announced its breakthrough **Applied Producer^(R) Eterna^(TM) FCVD^(TM)** (Flowable CVD¹) system, the first and only film deposition technology capable of electrically isolating the densely-packed transistors in 20nm-and-below memory and logic chip designs with a high-quality dielectric film. The gaps between these transistors can have aspect ratios of more than 30:1 - five times higher than current requirements - and highly-complex profiles. The Eterna FCVD system's unique process completely fills these gaps from the bottom up, delivering a dense, carbon-free dielectric film at up to half the cost of spin-on deposition methods - which require more equipment and many additional process steps.

"The need to fill smaller and deeper structures in advanced chip designs creates a physical roadblock for existing deposition technologies. Applied has broken through this barrier today with the introduction of its new Eterna FCVD system - delivering the disruptive technology that can enable the continued progress of Moore's Law," said Bill McClintock, vice president and general manager of Applied's DSM/ CMP² Business Unit. "With the Eterna FCVD system, Applied continues its decade-long leadership in gap-fill technology, providing a unique, simplified and cost-effective solution for customers to meet the challenges of multiple new chip generations."

Applied's proprietary Eterna FCVD process delivers a liquid-like film that flows freely into virtually any structure shape to provide a bottom up, void-free fill. The Eterna FCVD system is installed at six customer sites for DRAM, Flash and Logic applications, where it is integrated on Applied's benchmark Producer platform.

At 1:00 p.m. PDT, Applied will host a live webcast at http://www.appliedmaterials.com/2010_SSG/ discussing this breakthrough technology and provide a multimedia resource containing video, photographs and other materials concerning this product at <http://www.becauseinnovationmatters.com>.

Applied Materials, Inc. (Nasdaq:AMAT) is the global leader in Nanomanufacturing Technology(TM) solutions with a broad portfolio of innovative equipment, service and software products for the fabrication of semiconductor chips, flat panel displays, solar photovoltaic cells, flexible electronics and energy efficient glass. At Applied Materials, we apply Nanomanufacturing Technology to improve the way people live. Learn more at www.appliedmaterials.com.

¹CVD = *chemical vapor deposition*

²DSM/CMP = *Dielectric Systems and Modules/Chemical-Mechanical Planarization*

Photos/Multimedia Gallery Available: <http://www.businesswire.com/cgi-bin/mmg.cgi?eid=6406856&lang=en>

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