



## **Applied Materials Takes CMP Process Control to 45nm and Beyond With FullVision Endpoint System**

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SANTA CLARA, Calif.--(BUSINESS WIRE)--Nov. 29, 2007--Applied Materials, Inc. today announced its new Applied FullVision(TM) system that enables real-time control of dielectric CMP(1) processes to the 45 nanometer (nm) device node and beyond. The FullVision system couples Applied's patented window-in-pad technology with multiple-wavelength spectroscopy to deliver advanced in situ endpoint capability for a variety of dielectric materials, including oxide, STI(2), and poly CMP applications. The system demonstrates high repeatability across all applications with less than 150 angstrom, 3-sigma endpoint accuracy on patterned wafers. A major advance over single wavelength endpoint technologies, the FullVision system offers improved measurement accuracy with 50% higher reliability for dielectric applications.

"CMP endpoint technology was pioneered by Applied Materials and is key to delivering benchmark CMP performance," said Dr. Hichem M'Saad, vice president and general manager of Applied Materials' Dielectric Systems and CMP Business Group. "As films become thinner, CMP becomes increasingly difficult, requiring much more precise wafer-to-wafer process control to achieve acceptable yields. Using broadband spectral analysis, FullVision technology monitors individual polishing zones across the wafer to provide twice the accuracy and repeatability of competitive systems on a wide variety of process steps - without compromising throughput. These are vital requirements for advanced device manufacturing."

The FullVision system has already been adopted by major memory customers on their Applied Reflexion(R) LK CMP systems in high volume manufacturing. For these customers, the system has enabled higher CMP yield by significantly reducing wafer scrap caused by drifts in consumable sets and incoming wafer profile variations.

Applied Materials leads the industry in CMP technology -- with an installed base of more than 900 300mm CMP systems worldwide -- and in providing advanced in situ metrology for ensuring best-of-breed planarization performance. See [http://appliedmaterials.com/products/reflexion\\_lk\\_cmp\\_4.html](http://appliedmaterials.com/products/reflexion_lk_cmp_4.html) for more information on the Applied FullVision endpoint system.

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](http://www.appliedmaterials.com).

(1) CMP=chemical mechanical planarization

(2) STI=shallow trench isolation

MULTIMEDIA AVAILABLE:

<http://www.businesswire.com/cgi-bin/mmg.cgi?eid=5556577>

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