



Applied Materials Delivers Record Trench Depths with New Mariana Etch System

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SANTA CLARA, Calif., Apr 03, 2007 (BUSINESS WIRE) -- Applied Materials, Inc. today announced a significant leap forward in deep trench etch nanomanufacturing technology with its new Applied Centura(R) Mariana(TM) Trench Etch system. The Mariana is the first system that can etch 80:1 aspect ratio trenches--a critical capability that will allow customers to scale DRAM capacitors beyond 70nm. Dual-frequency tuning capabilities tightly control the etch profile and CD (critical dimension) with 2% etch depth non-uniformity, while the system's specialized plasma chemistry achieves unprecedented mask selectivity.

"Working with our customer, we've developed the industry's most advanced deep trench technology with the capability of etching structures with 30% higher aspect ratios than currently available systems," said Tom St. Dennis, senior vice president and general manager of Applied Materials' Etch, Cleans, Front End and Implant Groups. "This co-development program allowed us to develop the Mariana system to achieve its advanced technical capability while optimizing its productivity.

"Mariana systems have already been purchased by customers for 70nm DRAM production," added St.Dennis. "Since the key to trench capacitor scaling is increasing the aspect ratio, customers appreciate that the Mariana system has the extendibility to transition through multiple DRAM generations."

For more information about the Applied Centura Mariana Trench Etch system, please visit: www.appliedmaterials.com/products/trench_etch_4.html.

Applied's Metron division offers a pre-qualified abatement solution for the Mariana(TM) Trench Etch with its Marathon(TM) 8500 system. Providing a large flow capacity, high reliability and total redundancy, the Marathon can reduce cost of ownership by more than 50% over conventional abatement methods.

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 panels, 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.

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