



Applied Materials' New Carina System Overcomes Barriers to Etching High-k/Metal Gates

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SANTA CLARA, Calif.--(BUSINESS WIRE)--July 17, 2007--Applied Materials, Inc. today turned up the heat in etching the world's most advanced transistors with the launch of its Applied Centura(R) Carina(TM) Etch system. Using innovative high-temperature technology, the system is the only production-ready solution available today that delivers the material profiles that are essential for scaling logic and memory devices with high-k/metal gates (HK/MG) to 45nm and beyond. Applied's Carina technology is unique in that it makes no compromises in critical etch parameters: smooth, vertical sidewalls with zero silicon recess and zero byproduct residue are all achieved simultaneously.

"This is the first etch system specifically designed to meet the challenges of HK/MG production," said Tom St. Dennis, senior vice president and general manager of Applied Materials' Silicon Systems Group. "Our customers are very enthusiastic about the new technology offered by the Carina system and we have multiple installations at leading logic and memory semiconductor manufacturers worldwide."

Key to the system's benchmark performance is its proprietary high temperature cathode. Processing at high temperatures produces smooth, vertical profiles without the high-k "foot" and silicon recess that plague conventional-temperature alternatives. In addition, the high temperature prevents the etched material from re-depositing on the wafer and eliminates the need for complex wet/dry process combinations to remove the residue. Advanced chamber materials deliver long-term process stability and the lowest cost-of-consumables of any available advanced gate etch system.

Applied's Carina Etch technology will be showcased at SEMICON West as part of Applied's integrated HK/MG technology: a comprehensive portfolio of fully characterized systems and processes for building HK/MG structures in high volume production.

Applied Materials, Inc. (Nasdaq:AMAT - News) 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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