



## **Applied Materials' Endura Electra Cu Barrier & Seed System Wins Best Product Award from Semiconductor International Magazine**

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SANTA CLARA, Calif.--(BUSINESS WIRE)--Nov. 9, 1999--

Industry-leading System for Copper Metallization Selected By Chipmakers as Excellent Product

Applied Materials, Inc. today announced that its Endura(R) Electra Cu(TM) Barrier & Seed deposition system has won Semiconductor International magazine's 1999 Editors' Choice Best Product Award. This advanced PVD (physical vapor deposition) system received the award in recognition of its superior performance in depositing the barrier and copper seed layers required to build high-speed copper-based semiconductor chips.

"We are extremely pleased that Semiconductor International has chosen the Endura Electra Cu Barrier & Seed system for its prestigious Best Product Award," said Dr. Ashok Sinha, president of Applied Materials' Interconnect Systems and Modules Business Group. "This award represents tremendous customer recognition for our product, which addresses some of the most difficult technical challenges in copper interconnect production. We thank our customers, whose encouragement and guidance for continuous improvement has played a critical role in this product's rapid acceptance into the industry's most advanced fabs."

Candidates for Semiconductor International's Editors' Choice Best Product Award must be nominated by one or more customers who evaluate the product's actual performance in day-to-day semiconductor fab operations. Winning products must be verified by customers as having advanced processing technology and providing enhanced manufacturing results in established production facilities.

Introduced in December 1997, the Endura Electra Cu Barrier & Seed system was the industry's first system for depositing the barrier and seed layers required for copper interconnect circuitry. The system performs an integrated process sequence that includes a preclean step followed by deposition of a tantalum (Ta) or tantalum nitride (TaN) barrier layer and finally a thin "seed" layer of copper. Barrier and seed layer films are critical because they prevent the migration of copper atoms into other parts of the device and provide a smooth, uniform surface for subsequent copper bulk fill.

Applied Materials, Inc. is a Fortune 500 global growth company and the world's largest supplier of wafer fabrication systems and services to the global semiconductor industry. Applied Materials is traded on the Nasdaq National Market System under the symbol, "AMAT." Applied Materials' web site is <http://www.appliedmaterials.com>