

Applied Materials Launches Breakthrough 45nm PVD Copper Barrier/Seed Technology

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Applied Materials, Inc. today introduced the Applied Endura CuBS II, a breakthrough system that enables PVD copper barrier/seed deposition at 45nm and beyond. The system's new SIP EnCoRe II process chambers feature novel, high power density sputtering sources that create extremely dense, CVD-like conformal films for thin tantalum barrier and copper seed layers with minimal overhang, even at the bottom of very deep, small via holes. Also, sputtering target lifetime has been doubled to more than 20,000 wafers, significantly reducing cost of ownership and maintenance requirements.

"The SIP EnCoRe II chambers' unique design elevate barrier/seed technology to a level never before achieved by PVD technology and provides customers with the major leap forward in the deposition performance needed for extendibility to sub-65nm chips," said Dr. Farhad Moghadam, senior vice president and general manager of Applied Materials' Thin Films Product Business Group. "Combining the simplicity and reliability of the Endura2 platform with new, high-performance SIP EnCoRe II process chambers dramatically cuts operating cost and enables a vast range of copper chip designs to power future electronic products," added Dr. Moghadam.

The new Applied Endura CuBS II system is fully qualified and slated for 65nm production by a major chipmaker. Multiple Applied SIP EnCoRe II process chambers have already been shipped worldwide to North America, Asia and Japan. For more information on the Applied Endura CuBS II system, please visit [http:](http://)

//www.appliedmaterials.com/products/copper_barrier_seed.html.

Applied Materials' first generation Endura Cu Barrier/Seed system was instrumental in jump-starting the industry's successful move to copper chips. Since 1998, Applied has shipped nearly 300 copper barrier/seed systems to customers worldwide.

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