



SiGen and Applied Materials Collaborate on SOI Wafer Smoothing Technology

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SANTA CLARA, Calif.--(BUSINESS WIRE)--July 10, 2000--

Technology to Be Commercialized Using Applied Materials'

Epi Centura(R) System

Silicon Genesis Corporation (SiGen) and Applied Materials, Inc. have developed a new technology for smoothing SOI (silicon-on-insulator) wafer surfaces. This proprietary method, which uses a gas phase treatment combined with an epitaxial deposition process, offers significant advantages for building higher performance, next-generation chip designs.

The new SOI technology capability was demonstrated on an Applied Materials' Epi Centura(R) epitaxial deposition system which provided sub-angstrom smoothness and excellent thickness control, even for SOI wafers having a starting roughness as large as 60 angstroms.

The International Technology Roadmap for Semiconductors (ITRS99) estimates a requirement for sub-angstrom silicon wafer surface smoothness prior to gate oxidation for 0.18 micron and beyond device generations. SOI wafers with this exceptional level of surface smoothness can be directly used by production lines for increased gate oxide quality, improved device performance and yield.

Francois Henley, president and chief executive officer of Silicon Genesis, said, "This collaboration with Applied Materials to implement our early concepts has resulted in the development of a fully qualified, high-throughput, production-ready process to address present and future chip requirements with wide process margins. Applied Materials' efforts have been a major factor in the rapid advances we have made since we began shipping wafers from our SOI manufacturing line."

Grant Imper, General Manager of the Epitaxial Substrate Division at Applied Materials, said, "Our work with SiGen was key to the development of this non-contact smoothing technology as a new application of our Epi Centura epitaxial deposition system. We expect this technology to have important application not only in SOI but in other areas of wafer processing whenever accurate control of the top silicon layer thickness and smooth sub-angstrom surfaces are required."

Applied Materials and SiGen have entered into an agreement to commercialize this important new technology. Under the terms of the agreement, Applied Materials will retain certain exclusive rights to manufacture equipment performing the smoothing process while SiGen retains exclusive process rights in the field of SOI and cleaved substrates.

Details of these technology advances will be discussed in a joint paper to be given at the IEEE SOI conference in Wakefield, Massachusetts, in October 2000.

Applied Materials (Nasdaq:AMAT) is a leader of the Information Age and the world's largest supplier of products and services to the global semiconductor and flat panel display industries. Applied Materials' web site is <http://www.appliedmaterials.com>.

Silicon Genesis Corporation is an advanced materials supplier of silicon-on-insulator (SOI) wafers and specialized SOI fabrication tools for the microelectronics industry. The company promotes acceptance of its layer-transfer technology by continued development of its advanced process and equipment technology as well as through strategic alliances. Silicon Genesis Corporation's web site is <http://www.sigen.com>.

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