



Applied Materials and IMEC Team to Develop Innovative 32nm, 22nm Interconnects

January 24, 2006

SANTA CLARA, Calif.--(BUSINESS WIRE)--Jan. 24, 2006--Applied Materials, Inc. (Nasdaq:AMAT) and IMEC, Europe's leading independent nanoelectronics and nanotechnology research center, announced today a significant joint effort to develop 32nm and 22nm-node copper/low k interconnect processing technologies using a suite of Applied Materials' most advanced systems. The goal of the joint program is to address critical manufacturing challenges that chipmakers may face as they transition to future device generations, helping them to bring new products to market more rapidly while minimizing risk.

Applied's work with IMEC is part of IMEC's nanoelectronics research platform, which includes leading chipmaker partners Infineon, Intel, Panasonic/Matsushita, Philips Semiconductors, Samsung, STMicroelectronics, Texas Instruments and TSMC.

Dr. Luc Van den hove, vice president, Silicon Process and Device Technology of IMEC, said, "We selected Applied Materials as one of our key equipment providers for our core program on sub-45nm CMOS research, which is being carried out in cooperation with leading IC manufacturers. This critical development program will build on Applied Materials' extensive integration expertise in interconnect technology, especially in the areas of advanced low k dielectrics and copper conductors. With this new set of Applied interconnect systems we will have world-class capability for developing the sub-32nm generation back end process flow, and we expect to be collecting 32nm data from this tool set by the end of 2006."

As part of the joint program, Applied Producer(R) CVD(1) systems will be installed at IMEC, including tools to deposit Black Diamond(R) II with Nanocure(TM) UV curing technology and BLOk(R) low k films. An Applied Reflexion(R) LK CMP(2) system will be used for copper/low k planarization, featuring advanced process control and low downforce technology for polishing low k dielectric materials. An Applied Slimcell(R) ECP(3) system will be delivered to provide next-generation profile control of critical copper layers, and the Applied Endura(R) Barrier/Seed system with the latest preclean technology will be used to deposit the critical barrier and seed layers in nanometer-scale features with superior step coverage using ALD(4) and PVD(5) technologies.

"This alliance between IMEC and Applied Materials enables us to utilize a broad range of our industry-leading interconnect technologies to develop highly integrated, high-performance 32nm and below manufacturing processes," said Dr. Farhad Moghadam, senior vice president and general manager of Applied Materials' Thin Films Group. "This kind of expert collaboration is essential to better understand the complex interface engineering and circuit scaling issues that our customers will face with advanced technology nodes."

Applied Materials, Inc. (Nasdaq:AMAT), headquartered in Santa Clara, California, is the largest supplier of equipment and services to the global semiconductor industry. Applied Materials' web site is www.appliedmaterials.com.

About IMEC

IMEC is a world-leading independent research center in nanoelectronics and nanotechnology. Its research focuses on the next generations of chips and systems, and on the enabling technologies for ambient intelligence. IMEC currently has eight core partners in its sub-45nm CMOS research program: Infineon, Intel, Matsushita/Panasonic, Philips, Samsung, STMicroelectronics, Texas Instruments and TSMC. IMEC's research bridges the gap between fundamental research at universities and technology development in industry. Its unique balance of processing and system know-how, intellectual property portfolio, state-of-the-art infrastructure and its strong network of companies, universities and research institutes worldwide, position IMEC as a key partner with which to develop and improve technologies for future systems. IMEC is headquartered in Leuven, Belgium and has representatives in the US, China and Japan. Its staff of more than 1300 people includes over 400 industrial residents and guest researchers. In 2004, its revenues were EUR 159 million. Further information on IMEC can be found at www.imec.be.

- (1) CVD = chemical vapor deposition (2) CMP = chemical mechanical planarization
(3) ECP = electrochemical plating (4) ALD = atomic layer deposition
(5) PVD = physical vapor deposition

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SOURCE: Applied Materials, Inc.