

Applied Materials and Singapore's Institute of Microelectronics to Set Up Advanced Packaging Center

Joint facility will develop new tools and integration schemes for growing wafer-level packaging market

SINGAPORE, April 13, 2011 – Applied Materials, Inc., the global leader in providing manufacturing solutions for the semiconductor, flat panel display and solar photovoltaic industries, today signed a research collaboration agreement with the Institute of Microelectronics (IME), a world-renowned research institute under the Agency for Science, Technology and Research (A*STAR), to set up a Center of Excellence in Advanced Packaging in Singapore.

The Center will be located at Singapore's Science Park II and will focus on developing new capabilities in advanced packaging which is a key growth market for the semiconductor industry. The Center will have a full line of Wafer Level Packaging (WLP) processing equipment and will conduct research in semiconductor hardware, process, and device structures. Applied has led the industry in providing equipment for WLP since 2009 with a comprehensive line of processing systems for production line manufacturing.

A growing number of chip manufacturers have been adopting WLP, a type of chip packaging done at the wafer level to streamline the manufacturing process. Typically, multiple chips are vertically stacked in a single package, called a 3D-IC, and connected using through-silicon via (TSV) technology – to deliver higher performance and functionality in a smaller area package. Applied expects many advanced logic devices at the 40nm and below technology nodes to be packaged at the wafer level.

Mr. Russell Tham, Regional President, Applied Materials South East Asia, said, “This collaboration is part of Applied Materials’ strategy to expand our global R&D network and extend our leading position in advanced packaging, bringing our development activities closer to our customers in Asia.”

According to Professor Dim-Lee Kwong, Executive Director of IME, “The Center is an excellent example of strategic partnerships fostered between two critical players in the global semiconductor value chain. Such a close collaboration will spur the growth of next generation equipment and translate into greater share of the semiconductor market in Asia and the world for Applied Materials, and position Singapore as the country of choice for global semiconductor R&D.”

IME is a leading research institute with advanced R&D capabilities in 3D-ICs using TSV technology which is expected to drive future generations of mobile electronic devices. IME’s capabilities in this area and its expertise and commitment to building the 300mm facility – one of the most advanced semiconductor R&D facilities in Asia – will enable IME to support Applied Materials’ product development initiatives.

Mr. Lim Chuan Poh, Chairman of A*STAR, added, “The Center of Excellence in Advanced Packaging demonstrates how private enterprises can partner with public research institutes to grow their R&D activities in Singapore. The Center leverages the deep R&D capabilities in 3D-TSV, built by IME over the years, to support advanced packaging tool development for Applied Materials to meet the unique needs of the company and our economy. The setting up of this Center will help advance Singapore’s aspiration to be a global R&D hub and Asia’s Innovation Capital.”

Mr. Avinash Avula, General Manager, Asia Operations, Silicon Systems Group, said, “Applied Materials and IME share a common goal to extend our technology to meet the challenges and opportunities in advanced packaging. We are excited to engage with IME researchers in this effort.”

In April of last year, Applied Materials opened its Singapore Operations Center, its first facility in Asia for manufacturing advanced semiconductor equipment, at Changi North Industrial Park.

The ceremony today was attended by Singapore’s Minister for Trade and Industry, Mr. Lim Hng Kiang.

Applied Materials, Inc. (Nasdaq:AMAT) is the global leader in providing innovative equipment, services and software to enable the manufacture of advanced semiconductor, flat panel display and solar photovoltaic products. Our technologies help make innovations like smartphones, flat screen TVs and solar panels more affordable and accessible to consumers and businesses around the world. At Applied Materials, we turn today’s innovations into the industries of tomorrow. Learn more at www.appliedmaterials.com.

About the Institute of Microelectronics (IME)

The Institute of Microelectronics (IME) is a research institute of the Science and Engineering Research Council of the Agency for Science, Technology and Research (A*STAR). Positioned to bridge the R&D between academia and industry, IME’s mission is to add value to Singapore’s semiconductor industry by developing strategic competencies, innovative technologies and intellectual property; enabling enterprises to be technologically competitive; and cultivating a technology talent pool to inject new knowledge to the industry. Its key research areas are in integrated circuits design, advanced packaging, bioelectronics and medical devices, MEMS, nanoelectronics, and photonics.

For more information, visit IME on the Internet: <http://www.ime.a-star.edu.sg>.

About the Agency for Science, Technology and Research (A*STAR)

The Agency for Science, Technology and Research (A*STAR) is the lead agency for fostering world-class scientific research and talent for a vibrant knowledge-based and innovation-driven Singapore. A*STAR oversees 14 biomedical sciences and physical sciences and engineering research institutes, and six consortia & Centres, located in Biopolis and Fusionopolis as well as their immediate vicinity.

A*STAR supports Singapore’s key economic clusters by providing intellectual, human and industrial capital to its partners in industry. It also supports extramural research in the universities, hospitals, research centres, and with other local and international partners.

For more information about A*STAR, please visit www.a-star.edu.sg.

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