Lam Research Introduces Dielectric Atomic Layer Etching Capability for Advanced Logic

Latest Flex(TM) System Provides Industry's First Dielectric ALE Process Running in Production

FREMONT, CA -- (Marketwired) -- 09/06/16 -- Lam Research Corp.(NASDAQ: LRCX), an advanced manufacturer of semiconductor equipment, today announced that it is expanding its atomic layer etching (ALE) portfolio with the addition of ALE capability on its Flex™ dielectric etch systems. Enabled by Lam's Advanced Mixed Mode Pulsing (AMMP) technology, the new ALE process has demonstrated the atomic-level control needed to address key challenges in scaling logic devices to 10 nm and below. First in the industry to use plasma-enhanced ALE in production for dielectric films, the latest Flex system has been adopted as tool of record for high-volume manufacturing of logic devices.

"From transistor and contact creation to interconnect patterning, a new level of precision is needed by logic manufacturers to continue scaling beyond the 10 nm technology node," said Vahid Vahedi, group vice president, Etch Product Group. "For device-enabling applications like self-aligned contacts, where etch helps create critical structures, conventional technologies do not provide sufficient control for the stringent specifications now demanded. Our latest Flex product with dielectric ALE delivers atomic-scale control with proven productivity to meet customers' key requirements."

To continue logic device scaling, chipmakers are adopting new integration schemes such as those using self-aligned contacts (SACs) in order to address issues like RC delay. As a result, contact etch has become one of the most crucial processes, directly impacting both wafer yield and transistor performance. In order to define critical device structures with high fidelity, the etch process requires directional (anisotropic) capability with ultra-high selectivity, while also delivering the productivity needed for manufacturing.

For next-generation logic and foundry applications, Lam's Flex dielectric etch systems offer the industry's most advanced capacitively coupled plasma (CCP) reactor, featuring a unique, small-volume design to deliver repeatable results. The latest system uses proprietary AMMP technology to enable ALE of dielectric films such as silicon dioxide (SiO2). This capability results in a 2x improvement in selectivity over previous dielectric etch technologies while delivering atomic-level control.

About Lam Research

Lam Research Corp.(NASDAQ: LRCX) is a trusted global supplier of innovative wafer fabrication equipment and services to the semiconductor industry. Lam's broad portfolio of market-leading deposition, etch, and clean solutions helps customers achieve success on the wafer by enabling device features that are 1,000 times smaller than a grain of sand, resulting in smaller, faster, more powerful, and more power-efficient chips. Through collaboration, continuous innovation, and delivering on commitments, Lam is transforming atomic-scale engineering and enabling its customers to shape the future of technology. Based in Fremont, Calif., Lam Research is a Nasdaq-100 Index® and S&P 500® company whose common stock trades on the Nasdaq Global Select Market℠ under the symbol LRCX. For more information, please visit www.lamresearch.com. (LRCX-P)

Caution Regarding Forward-Looking Statements

Statements made in this press release that are not of historical fact are forward-looking statements and are subject to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements relate to, but are not limited to, the capability of Lam tools or their ability to enable scaling of transistor technology beyond the 10 nm technology node. Some important factors that may affect these forward-looking statements include the integration schemes and manufacturing processes used by the semiconductor manufacturer. Such forward-looking statements are based on current beliefs and expectations and are subject to risks, uncertainties and changes in condition, significance, value and effect, including those discussed in Lam's annual report on Form 10-K under the heading "Risk Factors" as well as in other documents filed by Lam with the Securities and Exchange Commission. Such risks, uncertainties and changes in condition, significance, value and effect could cause actual results to differ materially from those expressed herein and in ways not readily foreseeable. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the dates made and of information reasonably known to Lam as of the dates the statements were made. We undertake no obligation to release the results of any revisions to these forward-looking statements which may be made to reflect events or circumstances which occur after the date hereof or to reflect the occurrence or effect of anticipated or unanticipated events.

Company Contacts:
Kerry Farrell
Media Inquires
1-510-572-3175
email: kerry.farrell@lamresearch.com

Hui-Yun Chen
Asia Inquiries
Phone: +65-6347-6819
Email: hui-yun.chen@lamresearch.com

Satya Kumar
Investor Relations
1-510-572-3232
email: investor.relations@lamresearch.com

Source: Lam Research Corporation

News Provided by Acquire Media

---

https://newsroom.lamresearch.com/2016-09-06-Lam-Research-Introduces-Dielectric-Atomic-Layer-Etching-Capability-for-Advanced-Logic