Breakthrough EUV Dry Photoresist Technology from Lam Research Adopted by Leading Memory Manufacturer

Aether® Advanced Patterning Solutions Enhance Precision and Cost Efficiency to Accelerate Production of Next-Generation DRAM

FREMONT, Calif., Jan. 29, 2025 /PRNewswire/ -- Lam Research Corporation (Nasdaq: LRCX) today announced that Aether®, its innovative dry photoresist technology, has been selected by a leading memory manufacturer as production tool of record for the most advanced DRAM processes. A breakthrough introduced by Lam in 2020, dry resist extends the resolution, productivity, and yield of Extreme Ultraviolet (EUV) lithography, a pivotal technology used in the production of next-generation semiconductor devices.

"Lam's dry resist approach overcomes the biggest challenges of transferring fine DRAM designs to a wafer, delivering low-defect, high fidelity precision, while also offering key advantages in cost and sustainability," said Vahid Vahedi, chief technology and sustainability officer at Lam Research. "We are proud to collaborate with industry leaders to accelerate this DRAM patterning innovation into high-volume manufacturing."

The memory manufacturer will employ the Aether® tools in its most advanced DRAM nodes to form dry resist underlayers and films, and to use dry development processes. These processes overcome the traditional tradeoff between exposure dose and manufacturing defectivity to enable precise, low-defect patterning. This advancement drives down costs and enhances scanner productivity in the manufacturing of next-generation semiconductor devices.

Energy and compute intensive applications require continued scaling of memory capacity in an ever-smaller footprint to enable lower cost per bit of data. A key enabler of this scaling is industry-wide adoption of EUV lithography. Lam's dry photoresist technologies optimize the patterning process from resist application and stack deposition through final etching and cleaning, offering several advantages over conventional chemically amplified resist patterning.

Aether® significantly enhances EUV sensitivity and the resolution of each wafer pass, enabling the most challenging patterns to better adhere to the wafer and improving performance and yield. In addition, it offers key sustainability benefits by consuming less energy and five to ten times less chemicals than traditional wet chemical resist processes.

About Lam Research
Lam Research Corporation is a global supplier of innovative wafer fabrication equipment and services to the semiconductor industry. Lam's equipment and services allow customers to build smaller and better performing devices. In fact, today, nearly every advanced chip is built with Lam technology. We combine superior systems engineering, technology leadership, and a strong values-based culture, with an unwavering commitment to our customers. Lam Research (Nasdaq: LRCX) is a FORTUNE 500® company headquartered in Fremont, Calif., with operations around the globe. Learn more at www.lamresearch.com.

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 created by the Private Securities Litigation Reform Act of 1995. Such forward-looking statements relate to, but are not limited to: industry and market trends and expectations; customer adoption and usage of Lam products; and product performance, including technical, cost and sustainability benefits. Some factors that may affect these forward-looking statements include: the actions of our customers and competitors may be inconsistent with our expectations; business, political and/or regulatory conditions in the consumer electronics industry, the semiconductor industry and the overall economy may deteriorate or change; trade regulations, export controls, trade disputes, and other geopolitical tensions may inhibit our ability to sell our products; supply chain cost increases and other inflationary pressures have impacted and may continue to impact our profitability; supply chain disruptions or manufacturing capacity constraints may limit our ability to manufacture and sell our products; and natural and human-caused disasters, disease outbreaks, war, terrorism, political or governmental unrest or instability, or other events beyond our control may impact our operations and revenue in affected areas; as well as the other risks and uncertainties that are described in the documents filed or furnished by us with the Securities and Exchange Commission, including specifically the Risk Factors described in our annual report on Form 10-K for the fiscal year ended June 30, 2024 and our quarterly report on Form 10-Q for the fiscal quarter ended September 29, 2024. These uncertainties and changes could materially affect the forward-looking statements and cause actual results to vary from expectations in a material way. The Company undertakes no obligation to update the information or statements made in this release.

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