



ACM Research Announces Major Upgrades to Its Ultra C wb Wet Bench Cleaning Tool for Advanced Chip Manufacturing

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ACM's patent-pending nitrogen bubbling technique provides significant wet etching uniformity improvement and enhanced cleaning performance

FREMONT, Calif., July 24, 2025 (GLOBE NEWSWIRE) -- [ACM Research, Inc.](#) ("ACM") (NASDAQ: ACMR), a leading supplier of wafer and panel processing solutions for semiconductor and advanced packaging applications, today announced major upgrades to its [Ultra C wb cleaning tool](#). These new enhancements are designed to meet the demanding technical requirements of advanced-node manufacturing processes.

The upgraded Ultra C wb features a patent-pending nitrogen (N₂) bubbling technology to solve poor wet etching uniformity and by-product regrowth. These issues frequently appear in conventional wet bench processes of phosphoric acid in high aspect ratio trenches and via structures in advanced-node processes. ACM's patent-pending N₂ bubbling technique enhances the transport efficiency of phosphoric acid and promotes the uniformity of temperature, concentration and flow velocity in wet etching bath. The improved mass transfer efficiency of the wet etching process avoids by-product accumulation in wafer micro-structures to prevent regrowth. This technology holds significant application potential in the wet etching process for manufacturing 3D DRAM, 3D logic and 500+ layer 3D NAND devices.

"With performance a top priority, ACM has enhanced its Ultra C wb tool to deliver improved results by integrating the N₂ bubbling technique," said ACM's President and Chief Executive Officer, Dr. David Wang. "Batch processing remains a vital component of the wet processing market, offering advantages such as cost-effectiveness, increased efficiency, and lower chemical consumption compared to single-wafer wet cleaning."

New Features and Benefits of the Upgraded Ultra C wb Tool:

- **Enhanced Etching Uniformity:** Compared to conventional batch processes for wet cleaning, the Ultra C wb platform is equipped with the N₂ bubbling technique, improving within-wafer and wafer-to-wafer wet etching uniformity by more than 50%.
- **Enhanced Particle Removal Performance:** The Ultra C wb platform's advanced cleaning capabilities have been proven in organic residue removal of special phosphoric acid additives in advanced-node processes.
- **Expanded Process Capabilities:** The upgraded bench module is qualified for three layers of advanced-node processes, including: stack silicon nitride removal, channel hole polysilicon etch back and gate line tungsten recess. It is compatible with a variety of chemical solutions, such as phosphoric acid, H₄ etchant (a mixed acid solution typically used for metal film etching), tetramethylammonium hydroxide (TMAH), standard clean 1 (SC₁) and silicon-germanium (SiGe) etching solution, etc. Additional layers and applications are currently in development at the customer site.
- **Proprietary Design:** The nitrogen bubbling technology designs in the patent application generate large-size bubbles with good uniformity, while the bubble density can be precisely controlled. The N₂ bubbling core technology can be applied to ACM's Ultra C Tahoe (single-wafer and bench combined cleaning tool) platform, effectively addressing customers' future process requirements.

Forward-Looking Statements

Certain statements contained in this press release are not historical facts and may be forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as "plans," "expects," "believes," "anticipates," "designed," and similar words are intended to identify forward-looking statements. Forward-looking statements are based on ACM management's current expectations and beliefs, and involve a number of risks and uncertainties that are difficult to predict and that could cause actual results to differ materially from those stated or implied by the forward-looking statements. A description of certain of these risks, uncertainties and other matters can be found in filings ACM makes with the U.S. Securities and Exchange Commission, all of which are available at www.sec.gov. Because forward-looking statements involve risks and uncertainties, actual results and events may differ materially from results and events currently expected by ACM. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. ACM undertakes no obligation to publicly update these forward-looking statements to reflect events or circumstances that occur after the date hereof or to reflect any change in its expectations with regard to these forward-looking statements or the occurrence of unanticipated events.

About ACM Research, Inc.

ACM develops, manufactures and sells semiconductor process equipment spanning cleaning, electroplating, stress-free polishing, vertical furnace processes, track, PECVD, and wafer- and panel-level packaging tools, enabling advanced and semi-critical semiconductor device manufacturing. ACM is committed to delivering customized, high-performance, cost-effective process solutions that semiconductor manufacturers can use in numerous manufacturing steps to improve productivity and product yield. For more information, visit www.acmr.com.

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