

Nanometrics Introduces SpectraProbe Analysis Software

Advanced software and algorithms enhancing Nanometrics metrology fleet capabilities fab-wide

MILPITAS, Calif., July 11, 2017 (GLOBE NEWSWIRE) -- Nanometrics Incorporated (NASDAQ:NANO), a leading provider of advanced process control systems, today announced the introduction of SpectraProbe™, a new software-based process control solution designed to provide advanced data analytics to maximize fab productivity. Complementing the high-fidelity modeling capabilities of NanoDiffract® for optical critical dimension (OCD) metrology, SpectraProbe analyzes data generated by a customer's fleet of Nanometrics Atlas®, IMPULSE® and T3 metrology systems, providing real-time excursion monitoring, rapid model-less OCD recipe analysis and tracking of other process parameters.

When combined with patented Atlas full Mueller matrix data set and SpectraProbe machine learning algorithms, a unique model-less recipe mode has been developed for 3D-NAND channel hole etch tilt measurement. "Not only are we able to reduce time to solution from days to minutes, SpectraProbe measurements can be done in-die. Furthermore, our tilt measurement mode provides customers with the ability to discover excursions quickly and determine when process tools, such as etchers, require maintenance, generating a significant cost savings in preventative maintenance cycles and meaningful improvement in edge of wafer die yield," said Adrian Wilson, vice president and general manager of the software & data analytics business unit at Nanometrics.

SpectraProbe expands Nanometrics software process control metrology suite which includes model-based NanoDiffract OCD measurement and fleet management tools for the Atlas, IMPULSE and T3 family of metrology systems. "We are engaged with multiple customers in advanced 3D-NAND development that are working to resolve new manufacturing challenges as they ramp their processes. SpectraProbe provides our customers with expanded analysis capabilities, reduced time to solution and new insights into process tool performance," continued Wilson. "Our machine learning algorithms can stream process health in real-time to a user dashboard, a factory host or directly to the fab's big data analytics system, providing customers with even more data and insight to control manufacturing processes".

For a review of SpectraProbe and the full suite of process control metrology solutions visit Nanometrics at SEMICON West July 11-13, Moscone Center, San Francisco, booth #5488 North hall.

About Nanometrics

Nanometrics is a leading provider of advanced, high-performance process control metrology and inspection systems used primarily in the fabrication of semiconductors and other solid-state devices, including sensors, optoelectronic devices, high-brightness LEDs, discretes and data storage components. Nanometrics' automated and integrated metrology systems measure critical dimensions, device structures, topography and various thin film properties, including three-dimensional features and film thickness, as well as optical, electrical and material properties. The company's process control solutions are deployed throughout the fabrication process, from front-end-of-line substrate manufacturing, to high-volume production of semiconductors and other devices, to advanced three-dimensional wafer-level packaging applications. Nanometrics' systems enable advanced process control for device manufacturers, providing improved device yield at reduced manufacturing cycle time, supporting the accelerated product life cycles in the semiconductor and other advanced device markets. The company maintains its headquarters in Milpitas, California, with sales and service offices worldwide. Nanometrics is traded on NASDAQ Global Select Market under the symbol NANO. Nanometrics' website is <http://www.nanometrics.com>.

Forward Looking Statements

Certain statements in this press release are forward-looking statements that involve a number of risks and uncertainties that could cause actual results to differ materially from those described in this release. Although Nanometrics believes that the expectations reflected in the forward-looking statements are reasonable, actual results could differ materially from these expectations due to a variety of factors, including, but not limited to: failure of customers to adopt the new products; decreased levels of industry spending; Nanometrics' inability to gain additional market share, increase sales, ship products as scheduled, achieve customer acceptance of new products or outperform the industry; decreased demand for Nanometrics' products; shifts in the timing of customer orders and product shipments; technology adoption rates; changes in customer and product mix; changes in market share; changes in operating expenses; and general economic conditions. For additional information and considerations regarding the risks faced by Nanometrics that could cause actual results to differ materially, see its annual report on Form 10-K for the year ended December 31, 2016, as filed with the Securities and Exchange Commission on March 3, 2017 including under the caption "Risk Factors," as well as other periodic reports filed

with the SEC from time to time. Nanometrics disclaims any obligation to update information contained in any forward-looking statement, except as required by law.

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Source: Nanometrics Incorporated

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