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Thermo Scientific Helios 5 EXL Wafer DualBeam Offers Automation in TEM Sample Prep to Help Accelerate Time-to-Yield
Expedite TEM preparation with machine learning capabilities

HILLSBORO, Ore., April 20, 2021 /PRNewswire/ -- Thermo Fisher Scientific, the world leader in serving science, today unveiled the Helios 5 EXL Wafer DualBeam, designed to meet increasing sample volumes and analysis needs of semiconductor manufacturers as they scale operations. The Helios 5 EXL includes machine learning and advanced automation capabilities that deliver precise sample preparation to support sub-5 nanometer nodes and gate-all-around semiconductor manufacturing and yield learning.

As technology design gets smaller and more complex, semiconductor manufacturers need more reproduceable, high volume TEM analysis results. Increasing demand for atomic-scale data presents scalability challenges for busy labs to achieve desired results on advanced devices. Adding gate-all-around technology, which includes more interfaces, more films, and more profiles to measure at sub-nanometer resolution than other commercially available solutions, makes this process even more difficult to scale in high volume.

By applying machine learning and closed loop end pointing, the Helios 5 EXL delivers cut placement precision and enables users to produce challenging samples with consistently high quality. Compared to existing solutions on the market, improved automation capabilities support a higher tool-to-operator ratio, designed to maximize sample throughput and technical resource productivity.

"Semiconductor labs are under intense pressure to provide TEM data faster to support process monitoring and advance volume learning curves without increasing costs," said Glyn Davies, vice president and general manager of semiconductor at Thermo Fisher. "The Helios 5 EXL addresses this challenge with scalable, repeatable, and high precision TEM sample preparation."

By supporting whole wafers analysis, the Helios 5 EXL enables semiconductor manufacturers to achieve a high TEM analysis success rate by extracting more data from each wafer than is supported on commercially available solutions.

To learn more about the Thermo Scientific Helios 5 EXL Wafer DualBeam, visit https://ter.li/p0gihw.

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Media Contact Information:
Brianna Radicioni
Thermo Fisher Scientific
+1 617-390-3924
brianna.radicioni@thermofisher.com

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