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Samsung and Nova Publish Joint Research at SPIE Advanced Lithography Conference

Demonstrating In-Line capabilities of Spectral interferometry and Raman Spectroscopy for advanced memory applications

REHOVOT, Israel - February 27, 2024 - Nova (Nasdaq: NVMI) today announced that it will publish two co-authored papers with Samsung R&D Center research at SPIE Advanced Lithography 2024. The papers will be presented at the SPIE by Nova and Samsung, at the Metrology, Inspection and Process Control conference.

The papers are a result of the continuous collaboration between the companies that is driving numerous innovative joint development programs to enhance advanced chip manufacturing. The papers demonstrate multiple novel technologies Nova avails for advanced process control by developing unique solutions to measure critical parameters of interest on complex structures inside memory arrays.

The first paper "Unique Spectral Interferometry Solutions for Complex High Aspect Ratio 3D NAND Structures" demonstrates the capabilities of spectral interferometry (SI) with vertical traveling scatterometry algorithms (VTS) and AI capabilities to solve challenges in complex high-aspect-ratio structures, such as 3D NAND. This is achieved by measuring complex layer thicknesses of the multideck 3D structures directly from the VTS signals, without modeling, while filtering information from the underlayers. In addition, VTS and AI enable direct profiling of the deep through-type cell metal contacts in the areas with nonperiodic staircases and significant lateral variations.

The second paper, "On-Cell Thickness Monitoring of Chalcogenide Alloy Layer using Spectral Interferometry, Raman Spectroscopy, and Hybrid Machine Learning", introduces in addition to

VTS modeling, the use of inline Raman Spectroscopy. The Raman signals corresponding to specific material bonds are converted to in-line on-cell thickness and composition measurement of critical chalcogenide material. It is demonstrated that Raman Spectroscopy results enable modeless AI solutions with VTS spectra, as a derivative of the solution's ability to measure material properties.

"We are excited about the opportunity to collaborate with Samsung R&D Center in introducing Nova's innovative technologies," said Dr. Shay Wolfling, Chief Technology Officer of Nova. "This collaboration enables us to evaluate, enhance and expand the use cases of our inline Spectral Interferometry and Raman technologies at critical process steps in the most advanced and challenging memory architectures. This joint work has demonstrated that through R&D collaboration with our customers, we can introduce groundbreaking solutions that will enable fast transition to high-volume manufacturing."

About Nova

Nova is a leading innovator and key provider of material, optical and chemical metrology solutions for advanced process control in semiconductor manufacturing. Nova delivers continuous innovation by providing state-of-the-art, high-performance metrology solutions for effective process control throughout the semiconductor fabrication lifecycle. Nova's product portfolio, which combines high-precision hardware and cutting-edge software, provides its customers with deep insight into developing and producing the most advanced semiconductor devices. Nova's unique capability to deliver innovative solutions enables its customers to improve performance, enhance product yields and accelerate time to market. Nova acts as a partner to semiconductor manufacturers from its offices worldwide. Additional information may be found on [Nova's website link](https://www.novami.com/) - <https://www.novami.com/>.

Nova is traded on the Nasdaq and TASE, Nasdaq ticker symbol NVMI.

Forward-Looking Statements

This press release contains forward-looking statements within the meaning of safe harbor provisions of the Private Securities Litigation Reform Act of 1995 relating to future events or our future performance, such as statements regarding, but not limited to, anticipated growth opportunities and projections about our business and its future revenues, expenses and profitability. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to differ materially from any future results, levels of activity, performance or achievements expressed or implied in those forward-looking statements. Factors that may affect our results, performance, circumstances or achievements include, but are not limited to, the following: increased information technology security threats and sophisticated computer crime; foreign political and economic risks including supply-chain difficulties; regulations that could restrict our operations such as economic sanctions and export restrictions; changes in U.S. trade policies; indirect effects of the Russia – Ukraine conflict; market instability including inflation and recessionary pressures; risks related to doing business with China; catastrophic events; inability to protect our intellectual property; open source technology exposure, including risks related to artificial intelligence; failure to compete effectively or to respond to rapid technological changes; consolidation in our industry; difficulty in predicting the length and strength of any downturn or expansion period of the market we target; factors that adversely affect the pricing and demand for our product lines; dependency on a small number of large customers; dependency on a single manufacturing facility per product line; dependency on a limited number of suppliers; difficulty in integrating current or future acquisitions; lengthy sales cycle and customer delays in orders; risks related to conditions in Israel, including related to the recent attack by Hamas and other terrorist organizations from the Gaza Strip and Israel's war against them; risks related

to our convertible notes; currency fluctuations; and quarterly fluctuations in our operating results. We cannot guarantee future results, levels of activity, performance or achievements. The matters discussed in this press release also involve risks and uncertainties summarized under the heading "Risk Factors" in Nova's Annual Report on Form 20-F for the year ended December 31, 2023, filed with the Securities and Exchange Commission on February 20, 2024. These factors are updated from time to time through the filing of reports and registration statements with the Securities and Exchange Commission. Nova Ltd. does not assume any obligation to update the forward-looking information contained in this press release.