Canada-Japan Funding Fuels Xanadu and Mitsubishi Chemical Partnership on Quantum Semiconductor Research

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TORONTO, Aug. 25, 2026 (GLOBE NEWSWIRE) -- Xanadu Quantum Technologies Limited ("Xanadu"; NASDAQ/TSX: XNDU), a leading photonic quantum computing company, has announced the next phase of its collaboration with Mitsubishi Chemical, a major Japanese chemical manufacturer, to advance semiconductor fabrication technologies using quantum computing algorithms. This next phase is supported by national innovation programs from both the Canadian and Japanese governments, aiming to scale Xanadu and Mitsubishi's previous work in simulating a vital process in next-generation semiconductor fabrication: extreme ultraviolet (EUV) lithography. Bringing together both Canadian and Japanese expertise in quantum computing and materials science, this collaboration underscores a shared commitment to driving global innovation in the semiconductor industry through quantum technologies.

EUV lithography enables the creation of powerful chips used across multiple industries, such as mobile, AI, and advanced computing, and is crucial for current and next-generation semiconductor manufacturing. However, its efficiency is often hindered by radiation-induced blurring, an inherently quantum phenomenon that remains a major bottleneck for classical simulations. In phase one of Xanadu and Mitsubishi's collaboration, the two companies demonstrated that quantum algorithms can accurately model key aspects of EUV lithography, specifically the optical properties of the photoresists used to etch lithographic patterns. The next phase of the collaboration aims to develop a production-ready workflow that will take parameters derived from Xanadu's quantum computing simulations and integrate them directly into Mitsubishi's multi-scale models to predict blur. The result will be a fault-tolerant quantum computing (FTQC)-ready software pipeline designed to identify materials that prevent blurring and secure a competitive advantage in semiconductor manufacturing.

Xanadu plans to provide a concrete demonstration and roadmap for how quantum computing can contribute to the development of EUV resist materials through this collaboration.
This second phase of the collaboration is being advanced with support from the National Research Council of Canada Industrial Research Assistance Program (NRC IRAP) and Japan's Strategic Innovation Promotion Program (SIP). The relevant SIP project is led by the National Institute of Advanced Industrial Science and Technology (AIST) and the Global Research and Development Center for Business by Quantum-AI Technology (G-QuAT). The collaboration aims to further strengthen research and business collaboration between the two countries' technology sectors.

Xanadu has previously received advisory services and more than $800,000 in funding from NRC IRAP, supporting its R&D in quantum computing across several projects, which helped lay the groundwork for this advancement.

"Our collaboration with Mitsubishi bridges quantum simulation and semiconductor fabrication, eliminating a critical manufacturing bottleneck and securing a competitive advantage for next-generation semiconductor technology. The funding from both the Canadian and Japanese governments underscores the importance of this partnership to advance the semiconductor industry globally," said Dr. Christian Weedbrook, Founder and Chief Executive Officer of Xanadu.

"This partnership expands on Mitsubishi's previously successful collaboration with Xanadu, where we demonstrated the utility of quantum computing in simulating EUV resist materials for semiconductor manufacturing," said Dr. Qi Gao, Senior Chief Scientist at Mitsubishi Chemical. "With support from national innovation programs and research organizations in both countries, we're excited to bring together Canadian and Japanese expertise in quantum computing and materials science."

"This project is a great example of connecting cutting-edge quantum computing research with real industrial challenges. In the critical field of semiconductor materials development, we expect this Japan-Canada collaboration to accelerate the real-world implementation of quantum technology. At SIP, we look forward to the new industrial value this initiative will create," said Dr. Masahiro Horibe, Sub-Program Director, Cross-ministerial SIP and Deputy Director, G-QuAT, AIST.

This shared initiative between Xanadu and Mitsubishi aims to showcase quantum computing innovation on the world stage while advancing critical quantum simulation capabilities for the global semiconductor industry. By bridging quantum innovation with industrial application, this continued partnership will establish a blueprint for quantum-driven material discovery. As Xanadu and Mitsubishi Chemical advance this joint pipeline, their work aims to unlock commercial value for early FTQC systems, while driving the future of global semiconductor fabrication.

About Xanadu

Founded in 2016, Xanadu is a Canadian photonic quantum computing company with the mission to build quantum computers that

are useful and available to people everywhere. Xanadu is building fault-tolerant quantum computers using light, with systems designed to compute at room temperature. Xanadu develops both hardware and software, including PennyLane, its open-source quantum computing platform. Xanadu is the first pure-play photonic quantum computing company to list on public markets (Nasdaq/TSX: XNDU) and is recognized globally for its breakthroughs in scalable quantum technologies. Visit xanadu.ai or follow on X @XanaduAI.

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About Mitsubishi Chemical

Mitsubishi Chemical Corporation, established in 1933, is a comprehensive chemical manufacturer that provides a wide range of materials, from basic chemicals to performance products. The company operates globally across diverse fields including mobility, semiconductors and communications, food, medical, and infrastructure. Mitsubishi Chemical aims to be a “Green Specialty Company” committed to solving social problems and to delivering impressive results to customers with the power of materials, under our Purpose that “We lead with innovative solutions to achieve KAITEKI, the well-being of people and the planet.” For further information, please visit our website:

https://www.m-chemical.co.jp/en/index.html

Forward-Looking Statements

This communication includes "forward-looking statements" within the meaning of the U.S. federal securities laws and "forward-looking information" within the meaning of applicable Canadian securities laws (collectively, "forward-looking statements"). Forward-looking statements may be identified by the use of words such as "estimate," "plan," "project," "forecast," "intend," "will," "expect," "anticipate," "believe," "seek," "target," "continue," "could," "may," "might," "possible," "potential," "predict" or similar expressions that predict or indicate future events or trends or that are not statements of historical matters. We have based these forward-looking statements on current expectations and projections about future events. These statements include: statements regarding potential funding and support from Canadian and Japanese national innovation programs; expectations regarding Xanadu and Mitsubishi’s ability to simulate extreme ultraviolet (EUV) lithography processes in next-generation semiconductor fabrication; Xanadu's ability to bring its technology to market; Xanadu's ability to scale its technology platform and advance toward practical, real-world use cases; Xanadu's ability to accelerate its commercial roadmap and leadership in photonic quantum computing; beliefs regarding the potential of light-based quantum systems to offer a path to scalable, fault-tolerant quantum computing; and Xanadu's mission to build quantum computers that are useful and available to people everywhere.

These forward-looking statements are provided for illustrative purposes only and are not intended to serve as, and must not be relied on as, a guarantee, an assurance, a prediction or a definitive statement of fact or probability. Actual events and circumstances are difficult or impossible to predict and will differ from assumptions, many of which are beyond the control of Xanadu. These forward-looking statements are subject to known and unknown risks, uncertainties and assumptions that may cause the actual results of the combined company following the transaction, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by such statements. Such risks and uncertainties include: that Xanadu is pursuing an emerging technology, faces significant technical challenges and may not achieve commercialization or market acceptance; Xanadu's historical net losses and limited operating history; that there is substantial doubt about Xanadu's ability to continue as a going concern; Xanadu's expectations regarding future financial performance, capital requirements and unit economics; Xanadu's use and reporting of business and operational metrics; Xanadu's competitive landscape; Xanadu's dependence on members of its senior management and its ability to attract and retain qualified personnel; the potential need for additional future financing; Xanadu's ability to manage growth and expand its operations; potential future acquisitions or investments in companies, products, services or technologies; Xanadu's reliance on strategic partners and other third parties; Xanadu's concentration of revenue in contracts with government or state-funded entities; Xanadu's ability to maintain, protect and defend its intellectual property rights; risks associated with privacy, data protection or cybersecurity incidents and related regulations; the use, rate of adoption, and regulation of artificial intelligence and machine learning; uncertainty or changes with respect to laws and regulations; uncertainty or changes with respect to taxes, trade conditions and the macroeconomic environment; material weaknesses in Xanadu's internal control over financial reporting and the combined company's ability to maintain internal control over financial reporting and operate as a public company; the occurrence of any event, change or other circumstance that could give rise to the termination of the business combination agreement; the outcome of any legal proceedings or government investigations that may be commenced against Xanadu; failure to realize the anticipated benefits of the transaction; the ability of the combined company to issue equity or equity-linked securities in the future; and other factors described in Xanadu's filings with the SEC (www.sec.gov) and the Canadian Securities Administrators (www.sedarplus.com). These forward-looking statements are based on certain assumptions, including that none of the risks identified above materialize; that there are no unforeseen changes to economic and market conditions, and that no significant events occur outside the ordinary course of business. Additional information concerning these and other factors that may impact such forward-looking statements can be found in filings and potential filings by Xanadu with the SEC and the Canadian Securities Administrators, including under the heading "Risk Factors." If any of these risks materialize or assumptions prove incorrect, actual results could differ materially from the results implied by these forward-looking statements. In addition, these statements reflect the expectations, plans and forecasts of Xanadu's management as of the date of this communication; subsequent events and

developments may cause their assessments to change. While Xanadu may elect to update these forward-looking statements at some point in the future, they specifically disclaim any obligation to do so, unless required by applicable securities laws. Accordingly, undue reliance should not be placed upon these statements.

In addition, statements that "we believe" and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this communication, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.