

ASX Announcement

5 August 2026

## **Adisyn Achieves Major Graphene Scale-Up Milestone on 200mm Wafer**

**Independent testing confirms graphene across 12 sampled locations on industry-standard 200mm semiconductor wafer**

### **Highlights**

- **Adisyn has for the first time successfully demonstrated the ability to deposit low-temperature graphene on a full-scale industrial 200mm semiconductor wafer - an industry-standard format widely used across global semiconductor manufacturing**
- **The 200mm wafer has approximately 300 times the surface area of Adisyn's previously announced process result on a 1cm<sup>2</sup> coupon, representing a substantial increase in the area coated in a single deposition run**
- **The achievement represents a significant step towards scaling Adisyn's low-temperature graphene deposition technology platform**
- **The milestone was achieved significantly ahead of the Company's internal development expectations, demonstrating the rapid progress of Adisyn's graphene semiconductor program**
- **The early pathfinder result shows the potential to scale to the 300mm wafer formats used in the most advanced semiconductor fabs. The achievement provides a platform for device-integration testing, prospective industry joint development programs and progression towards the 300mm wafer formats used in advanced AI, high-performance computing and memory devices**

Adisyn Ltd (ASX: AI1) ("Adisyn" or "the Company") is pleased to announce the company has achieved a major technical milestone in the development of its graphene semiconductor technology, having successfully scaled its low-temperature graphene deposition process to a full 200mm Cu semiconductor wafer. The deposition was done below 300°C. The achievement represents a significant increase from the Company's earlier laboratory-scale work and moves Adisyn's technology into an industry-standard wafer format widely used across global semiconductor manufacturing.

This the first publicly disclosed demonstration of low-temperature graphene deposition across an entire 200mm wafer.

**Commenting on the achievement, Adisyn Managing Director Arye Kohavi said:**

*"This is a huge step forward for Adisyn and a strong demonstration of the speed at which our graphene semiconductor technology is advancing."*

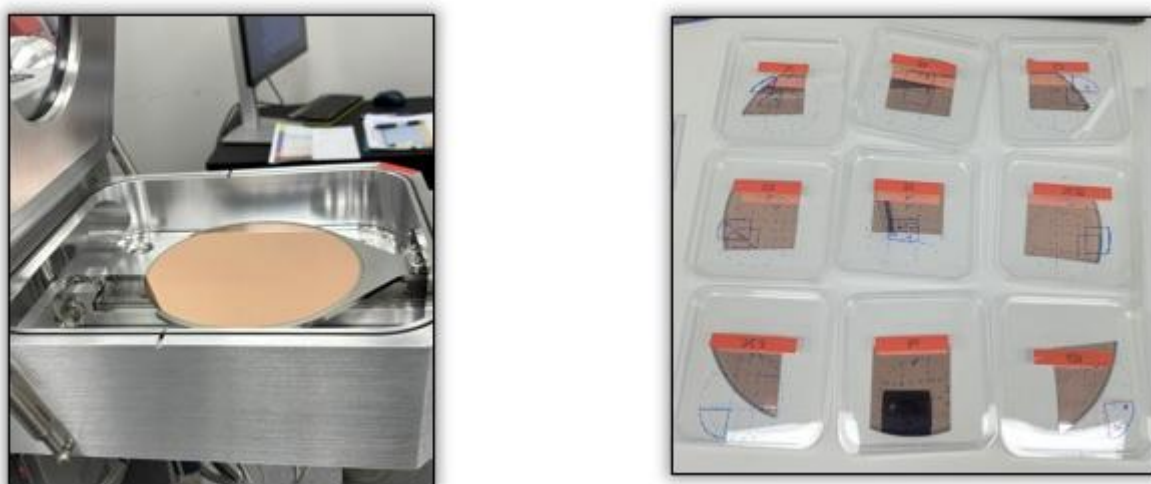
*Scaling a new materials technology from laboratory samples to a full 200mm semiconductor wafer presents significant technical challenges. Achieving that step - and identifying graphene at all 12 locations independently tested across the wafer - provides important validation of our technology and development approach."*

*Complete industrial wafer coverage is a critical goal that the company expected to achieve in just a few months, and meeting it today shortens the planned timelines for industry collaborations and integrations*

*This provides a stronger foundation from which to pursue potential joint development programs with semiconductor manufacturers and evaluate future commercial applications.”*

### Technology Overview

Adisyn successfully applied its low-temperature graphene deposition process across a full 200mm semiconductor wafer (Figure 1). With a surface area of approximately 314cm<sup>2</sup>, the wafer is approximately 300 times the area of the 1cm<sup>2</sup> coupon previously announced by the Company.



**Figure 1: The 200mm wafer before and after preparation for independent testing**

Following deposition, 12 sampling locations were selected across all four quadrants of the wafer and at varying distances from its centre (Figure 2). Each location was measured five times using Raman spectroscopy. Samples from all 12 locations were then examined using TEM at the Hebrew University of Jerusalem.

Raman spectroscopy was used to identify and characterise the deposited graphene, while Transmission Electron Microscopy (TEM) provided complementary nanoscale analysis. Graphene was identified at all 12 sampled locations, supporting successful deposition of graphene across the full 200mm wafer diameter.

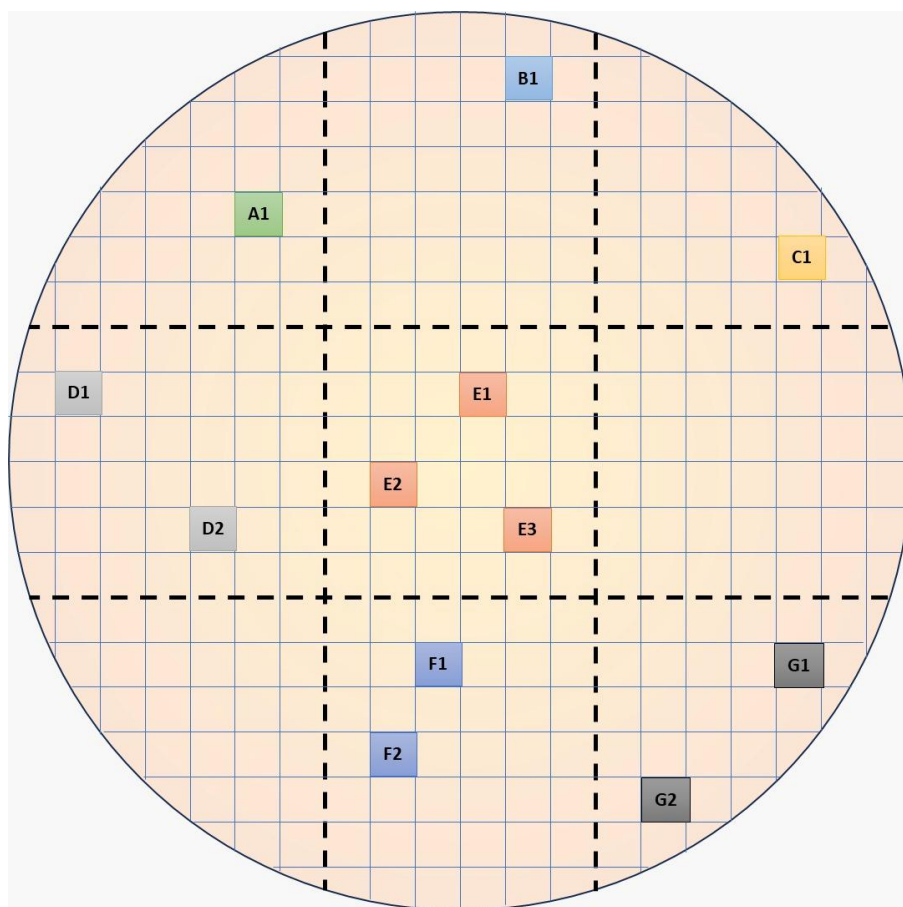


Figure 2: Sampling locations distributed across the 200mm wafer

## Representative Raman spectra (five measurements per location)

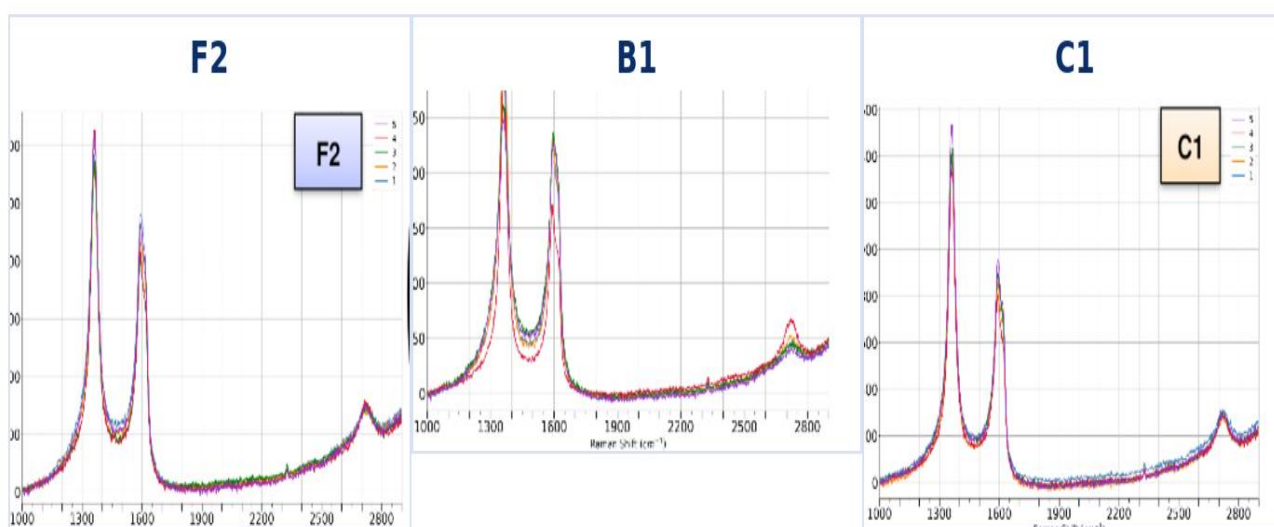


Figure 3: Representative Raman spectroscopy results from three sampled locations

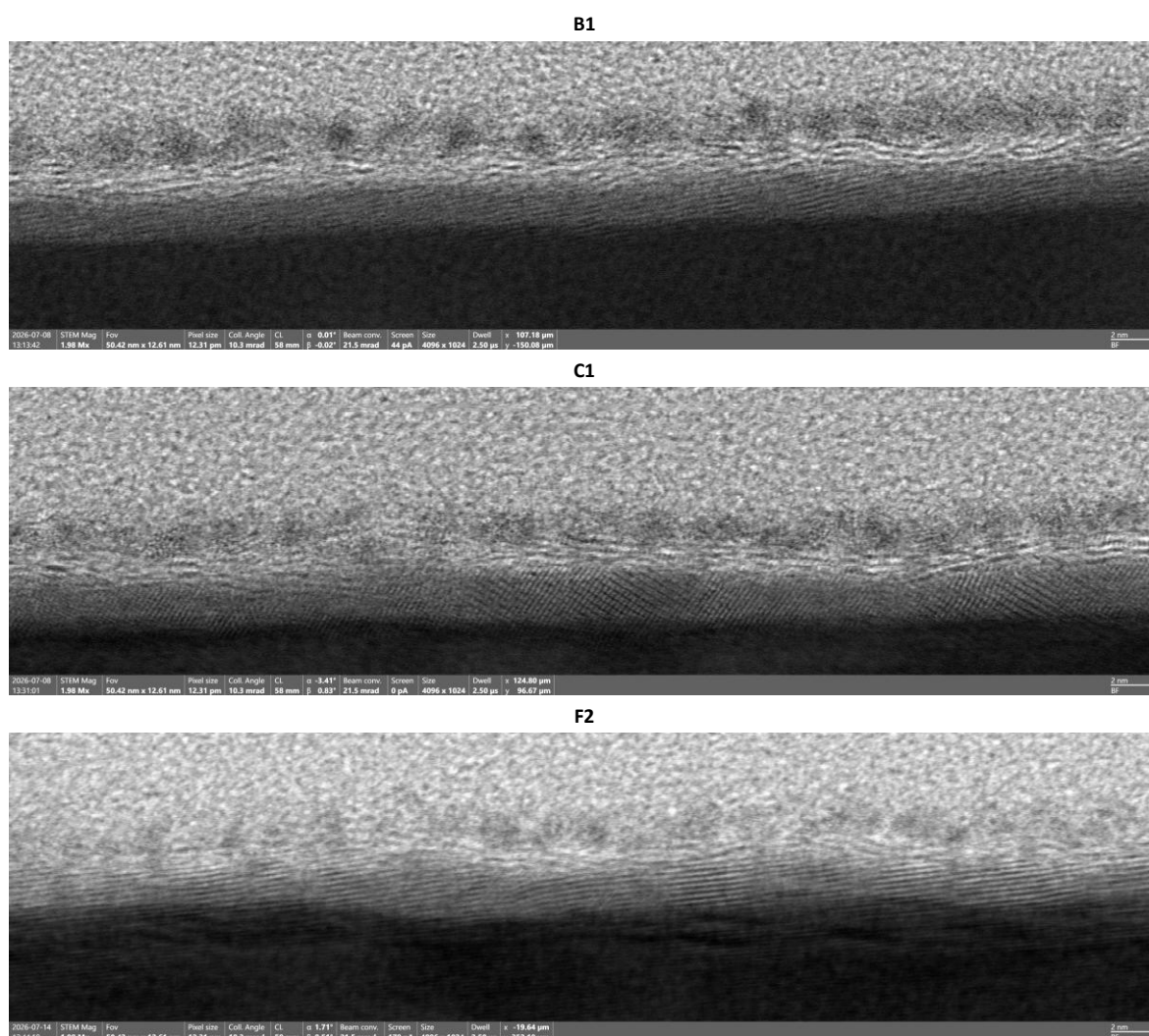


Figure 4: Representative TEM images from sampled locations B1, C1 and F2

## Strategic Significance

The successful transition from the previously announced 1cm<sup>2</sup> coupon deposition to a full 200mm semiconductor wafer represents a significant scale-up of Adisyn's graphene deposition technology platform. The 200mm wafer is an established industry-standard format used extensively across global semiconductor manufacturing. Demonstrating graphene deposition at this scale is therefore an important step in assessing the technology's potential application within commercial semiconductor manufacturing environments.

The independently verified results further confirm the technical foundation of Adisyn's process technology platform. They provide further confidence in our ability to aggressively pursue process development internally as well as with potential joint development programs with prospective industry partners. The achievement also supports Adisyn's broader objective of developing a low-temperature graphene deposition process platform that addresses many of the device performance constraints associated with conventional semiconductor materials.

## **Commercial Relevance and Market Opportunity**

Adisyn's achievement demonstrates that its low-temperature graphene deposition technology can be applied across a recognised semiconductor manufacturing format, providing an important platform for repeatability testing, device integration and potential joint development programs with industry partners.

Graphene is being investigated internationally for semiconductor interconnects and hybrid graphene-metal structures because of its electrical conductivity, thermal properties and potential to improve the performance and reliability of increasingly small interconnect structures. These challenges are particularly relevant to advanced AI, high-performance computing and memory devices. These advanced devices are predominantly manufactured on 300mm wafers, however the successful 200mm result represents an important pathfinder towards achieving that format.

Adisyn believes successful integration of its process technology platform will create commercial opportunities through potential licensing, joint-development, process or materials-supply models. Further development, device integration and customer qualification are required, and the Company has not provided revenue or earnings forecasts.

## **Next Phase of Development**

Following the successful 200mm wafer result, Adisyn will continue to refine and repeat the deposition process to further assess uniformity, defectivity and reproducibility; determine initial first-pass reliability data in various applications; advance technical engagement with prospective semiconductor industry partners; evaluate opportunities to integrate the technology into semiconductor development programs; and progress work directed towards larger wafer formats. The Company will provide further updates as material technical and commercial milestones are achieved.

**This announcement has been approved for release by the Board of Adisyn Ltd.**

**-ENDS-**

## **Further Information:**

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## **About Adisyn**

Adisyn Ltd (ASX: AI1) is an Australian technology company developing advanced graphene materials for high-value applications in the semiconductor and advanced materials sectors.

The Company's core focus is the development of a patented low-temperature Atomic Layer Deposition (ALD) process designed to enable direct graphene growth on semiconductor wafers, addressing the performance limitations of copper interconnects in next-generation semiconductor devices.

Adisyn is also exploring additional commercial applications of its graphene expertise, including advanced composite materials designed to reduce radar signatures in UAV and defence platforms.

Adisyn's broader business includes Adisyn Services, which provides managed IT services, cloud, cybersecurity and artificial intelligence solutions to Australian small and medium-sized enterprises.

**Forward-looking statements:**

Statements contained in this release, particularly those regarding possible or assumed future performance, revenue, costs, dividends, production levels or rates, prices, or potential growth of Adisyn Ltd are, or may be, forward-looking statements. Such statements relate to future events and expectations and as such, involve known and unknown risks and uncertainties. These forward-looking statements are not guarantees or predictions of future performance and involve known and unknown risks, uncertainties, and other factors, many of which are beyond the Company's control, and which may cause actual results to differ materially from those expressed in the statements contained in this release.

The Company cautions shareholders and prospective shareholders not to place undue reliance on forward-looking statements, which reflect the Company's expectations only as of the date of this announcement. The Company disclaims any obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, except as required by law.