

ASX Announcement

27 March 2025

Strategic Partnership with Tel Aviv University Nano Center to Accelerate Development

Highlights:

- **Strategic Partnership:** an agreement has been entered into with Jan Koum Center for Nanoscience and Nanotechnology at Tel Aviv University (TAU) to accelerate the development of graphene-based semiconductor technologies.
- **Access to World-Class Facilities:** access to advanced equipment. Immediate use of TAU's Beneq TFS 200 Atomic Layer Deposition (similar to the system acquired, former generation). The original plan was to start using this kind of ALD in June, after the installation in May.
- **Double ALD capacity:** The partnership grants the team access to an additional ALD system to perform parallel development in a cost effective manner.
- **Driving Development and Innovation:** The aim is to fast-track the development of cutting-edge graphene based semiconductor solutions specifically, nanomaterials on interconnects, advancing Adisyn's position in the market for graphene based advanced coatings and nanotechnology.
- **Intellectual Property Protection:** The IP created during the partnership will remain the exclusive property of the Company.

Adisyn Limited (ASX: AI1) ("Adisyn" or "the Company") is delighted to announce its wholly-owned semiconductor IP business, 2D Generation (2DG), has entered into a strategic partnership with Tel Aviv University's Jan Koum Center for Nanoscience and Nanotechnology (TAU Nano Center), a leading nanotechnology research center driving innovation in nanofabrication, MEMS (Micro-Electro-Mechanical Systems), nanomaterials, and semiconductor.

The Agreement, effective as of 26 March, 2025, setting the framework for collaboration with TAU Nano Center to explore innovative nanotechnology solutions. As part of the agreement, we will lease specialised equipment from the TAU Nano Center, including the Beneq TFS 200 Atomic Layer Deposition (ALD) system, which is essential for the Company's work in the field of advanced graphene based interconnect to replace copper.

2DG will be provided with immediate access to TAU Nano Center's ALD system. This system is the previous generation version of the ALD system which has been procured and is expected to be received and installed in the coming months (ASX: 11 Nov 2024). Having two machines will enable the team to work in parallel across the two systems and expand the development process, with the cost of the Strategic Partnership expected to be immaterial for the Company.

Chairman and CEO of 2D Generation, Arye Kohavi, commented: *"We are thrilled to enter this partnership which enhances our team's ability to innovate in the field of graphene-based coatings. The access to world-class facilities, coupled with the expertise of the TAU Nano Center's leading researchers, will enhance our product development, allowing us to bring our innovative and high-performance graphene materials to market faster. This agreement aligns perfectly with our commitment to advancing our interconnect solutions and securing our competitive edge in an global market."*

Alice Polacsi-Segev, CEO of the TAU NanoCenter, commented: *"We are proud to collaborate with 2D Generation on this groundbreaking initiative, which aligns perfectly with our vision and it reflects the TAU NanoCenter's unique capabilities in advanced nanofabrication and semiconductor research. Our state-of-the-art infrastructure and multidisciplinary expertise position us as a leading hub for cutting-edge innovation."*

The TAU Nano Center is a leading facility for nanotechnology research, with state-of-the-art tools and a world-class team of scientists and engineers. By leveraging these resources, AI1 aims to expand its work in graphene-based semiconductor interconnect architectures.

In particular, access to the Beneq TFS 200 ALD system (see Figure 1), a critical piece of equipment for precision nanomaterial coating, will enable us to enhance its product development processes.



Figure 1: the Beneq TFS 200 ALD system at the Tel Aviv University's Jan Koum Center for Nanoscience and Nanotechnology

Strengthening Market Position and Competitive Edge

The Partnership also positions AI1 to strengthen its competitive edge in the nanotechnology sector. By working alongside the TAU Nano Center, the Company will have access to a wealth of knowledge and cutting-edge technologies that can be leveraged to accelerate innovation and potentially reduce time to market.

Additionally, the collaboration will enable Adisyn to deepen its intellectual property portfolio, as any innovations developed during the partnership will be owned exclusively by the Company. This increases the value of Adisyn's intellectual property, which is a key asset for the Company's future growth and commercial success.

2D Generation's semiconductor IP

2DG is working with graphene to solve a major challenge in the semiconductor industry: the limitations of copper in maintaining efficiency at smaller scales, i.e. less than 5 nanometres, limits the continued miniaturisation of computer chips. Using copper as an interconnect metal below 5nm not only leads to less efficiency and higher manufacturing costs, it is also challenging to build this sort of circuitry at this scale or less.

The leading material of interest to solve the interconnect resolution issues of copper is graphene. Graphene, with its exceptional electrical conductivity and thermal stability, offers a potential solution for creating faster, more efficient connections between nano transistors, enabling continued progress in chip performance.

2DG aims to solve the interconnect problem using graphene with the development of a patented solution allowing graphene coating at sub-300 degrees centigrade, an achievement that has never been successfully completed prior to 2DG. This opens the door to the next generation of semiconductors capable of further miniaturisation, lower power consumption, less heat and greater computational power.

2DG's innovative technology centers around the aim of improving the performance and capabilities of the interconnect.

- An interconnect in a semiconductor refers to the conductive pathways that connect different components or regions within an integrated circuit (IC).
- These interconnects are crucial for the functionality of the IC as they facilitate the flow of electrical signals between transistors, capacitors, resistors, and other elements on the chip.
- Interconnects can be made of various materials, typically metals like aluminium or copper, and they can be implemented in different layers within the semiconductor structure.

- As IC's have become more complex, with smaller and more densely packed features, the design and materials used for interconnects have not evolved to address issues such as resistance, capacitance, and signal integrity and have reached scalability limitations.

The interconnect field has emerged as a critical technological barrier hindering industry progress. Overcoming this challenge is recognised as the "Holy Grail" within the industry, promising accelerated rates of and continued miniaturisation. Industry giants recognise that the company with a viable solution stands to gain a substantial competitive advantage.

AI1 anticipates delivery of a demo prototype in 2026 while partial Proof-of-Concept has already been demonstrated. 2DG has been working with world-renowned semiconductor research institute IMEC and has been accepted into ConnectingChips, a development program that is part of the EU Chips Act that also involves the world's leading designers, fabricators and suppliers of AI chips.

About the Jan Koum Center for Nanoscience and Nanotechnology, Tel Aviv University

The Jan Koum Center for Nanoscience and Nanotechnology is a globally recognised leader in the field of nanotechnology, driving cutting-edge research in nanofabrication, MEMS (Micro-Electro-Mechanical Systems), nanomaterials, and semiconductor technologies.



Figure 2: The Jan Koum Center for Nanoscience and Nanotechnology, Tel Aviv University. Picture by Harel Gilboa

The Center's state-of-the-art facilities, including an 800-square-meter cleanroom, advanced imaging tools, and over 40 fabrication instruments, provide an unparalleled environment for academic and industrial research. TAU Nano Center's multidisciplinary approach enables collaboration across a wide range of industries and scientific fields, positioning it as a critical player in advancing global innovation in nanotechnology. The Center has collaborated with a diverse range of major multinational companies across sectors such as advanced manufacturing, consumer electronics, semiconductor technology, defence, and security center.

-ENDS-

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

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About 2D Generation

2D Generation is a high-tech company specialising in graphene-based solutions for the semiconductor industry. Founded by experienced entrepreneurs and scientists, the company is dedicated to overcoming current technological limitations by developing faster, stronger, and more energy-efficient computer processing solutions. These advancements will support the next generation of AI, data storage, telecommunications, cybersecurity, mobile devices, and more.

About Adisyn

Adisyn is a leading provider of managed technology solutions, primarily serving the SME market. The Company leverages cutting-edge technologies, including artificial intelligence and cybersecurity, to deliver bespoke solutions. Through its wholly owned subsidiary, **2D Generation**, Adisyn is advancing graphene-based semiconductor technologies to overcome industry limitations and drive innovation across sectors including AI, telecommunications, and data storage.

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 put 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.