Nanotech lab •

NTU, Nanofilm in R&D tie-up

A $66 million corporate lab that will boost the development of nanotechnology solutions in Singapore was officially launched at Nanyang Technological University (NTU) on Nov 28.

The 19,000 sq ft facility, slated to be ready by the second half of 2024, is a five-year tie-up between NTU and Nanofilm Technologies.

Work on 10 industry-focused projects under four main research areas has already begun.

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$66m corporate lab launched to develop nanotech solutions

Deputy Prime Minister Heng Swee Keat conversing with Dr Shi Xu, founder and executive chairman of Nanofilm, at the launch of the corporate lab on Nov 28, with Dr Tan Chong Wei, senior research fellow at NTU (in light-blue jacket) and Professor Lam Khin Yong, NTU's vice-president (industry), looking on. ST PHOTO: AZMI ATHNI

NTU-Nanofilm venture to turn research outcomes into market-ready solutions

Timothy Goh

A $66 million corporate lab that will boost the development of nanotechnology solutions in Singapore was officially launched at Nanyang Technological University (NTU) on Nov 28.

The 19,000 sq ft facility in Jurong, slated to be completed by the second half of 2024, is a five-year collaboration between NTU and Nanofilm Technologies.

A total of 22 scientists and engineers from NTU and Nanofilm will work together in the lab during this period. A further 27 researchers will be hired and 13 PhD candidates trained to work in the facility by 2028.

Work has already begun on 10 industry-focused projects under four main research areas – coating equipment technologies, advanced materials that form coatings such as those to protect against corrosion on dental implants, nano-fabrication technologies for use in the lenses of virtual reality devices, and increasing the affordability of hydrogen energy as a clean fuel.

NTU president Ho Teck Hua said: "This partnership will create a powerful platform to accelerate the translation of research outcomes and breakthroughs into market-ready solutions, propel local technology forward, and expand NTU's impact on industry and society.

"The corporate lab will also play a pivotal role in grooming talent for Singapore's advanced manufacturing sector as it becomes smarter and greener."

Nanofilm, founded in 1999 by former NTU School of Electrical and Electronic Engineering don Shi Xu, was spun off from research conducted at the university.

The mainboard-listed company, which specialises in advanced materials and coatings, raised $470 million in its initial public listing in 2020. It chalked up profits of $62.2 million in 2021 and $43.8 million in 2022.

But in the first six months of 2023, the company recorded a net loss of $7.6 million after posting a 34.4 per cent fall in revenue.

Nanofilm chief strategy officer Gian Yi Hsen noted that despite the firm's difficulties in the short term, it remains committed to investing in research and development for the long term.

He said: "Deep-tech companies cannot afford to invest only when it is needed. We need to do it ahead, build the right capabilities and technologies and prove that they work even before our customers need it."

Speaking at the launch ceremony on Tuesday, Deputy Prime Minister Heng Swee Keat noted that Singapore's efforts to build a deep-tech ecosystem have accelerated over the past few years.

He said Singapore is partnering with venture builders, attracting venture capital and fostering innovative start-ups, adding that deep-tech investments in the Republic have almost doubled between 2020 and 2022.

Mr Heng, who is also the Coordinating Minister for Economic Policies, added that corporate laboratories play an important role in Singapore's innovation ecosystem.

"They bring like-minded research and enterprise partners together to develop new breakthroughs and actionable solutions that can be brought to the market," he said.

He added: "Especially in a small ecosystem like ours, partnerships like these can enable innovation, accelerate progress and amplify impact both in Singapore and beyond."

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Completion date: Second half of 2024
Researchers: 22 scientists and engineers from NTU and Nanofilm will work together in the lab during this period. A further 27 researchers will be hired and 13 PhD candidates trained to work in the facility by 2028.

Main research areas:
- Coating equipment technologies
- Advanced materials that form coatings
- Nano-fabrication technologies for use in the lenses of virtual reality devices
- Increasing the affordability of hydrogen energy as a clean fuel.