

Singapore opens state-of-the-art facility to advance hydrogen research, training and collaborations

13 August 2024 | News

NUS Centre for Hydrogen Innovations to host Eight projects for potential funding, with the aim of realising a quantum leap in hydrogen innovation and commercialisation

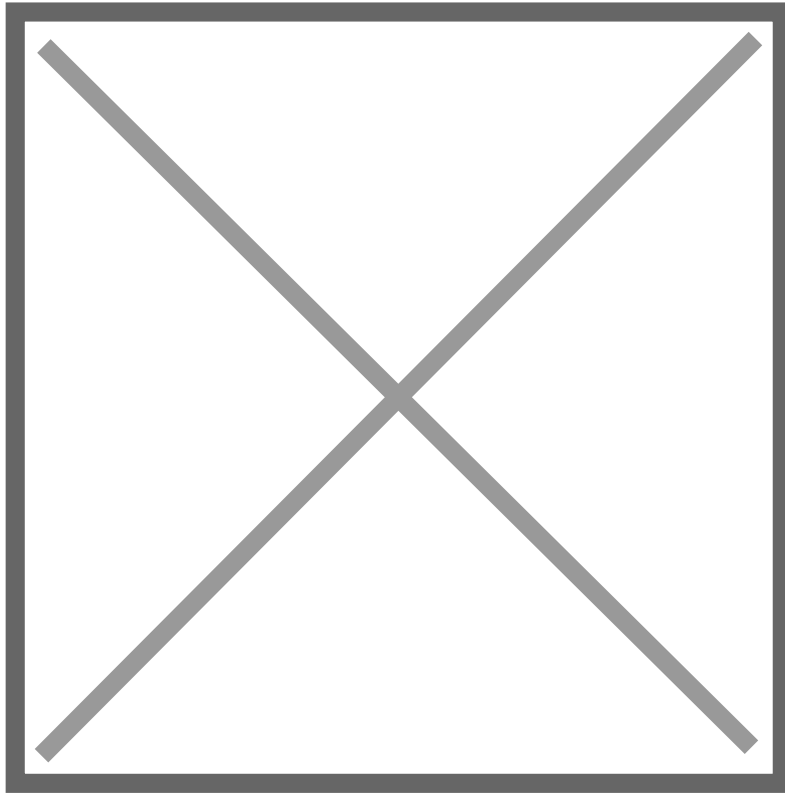


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Giving Singapore's National Hydrogen Strategy a big push, the National University of Singapore (NUS) today officially launched its Centre for Hydrogen Innovations (CHI) with the inauguration of an advance research facility as the Centre's flagship innovation hub. Spanning over 600 square metres and furnished with state-of-the-art research equipment, the new facility aims to boost hydrogen research and commercial application in Singapore.

The launch of CHI was officiated by Dr Tan See Leng, Minister for Manpower and Second Minister for Trade and Industry, in the presence of distinguished guests from the hydrogen research and industry ecosystem in Singapore.

CHI was first established as a virtual Centre in July 2022 through an investment of S\$25 million, comprising a S\$15 million endowed gift from Temasek and S\$5 million matching fund from the government, along with additional funding from NUS. The Centre takes a holistic approach to tackle technological and infrastructural challenges in enabling a hydrogen economy through harnessing a broad spectrum of expertise, including science and engineering, from various entities at NUS. At CHI, research activities are organised under four key areas: green hydrogen production, hydrogen storage, hydrogen carrier systems, and hydrogen utilisation.



Highlighting the importance of CHI's work, Dr Tan noted in his keynote speech, "Singapore is seriously studying low-carbon hydrogen as a decarbonisation pathway". However, hydrogen technology is still nascent. Significant technological breakthroughs are required to enable the deployment of hydrogen at scale and in a cost-effective manner. We must prioritise raising the technological readiness levels and the market-readiness levels of hydrogen technologies. This requires closer collaboration across all stakeholders across the ecosystem."

Over the last two years, CHI has provided more than S\$4.2 million in grants to support 17 innovative projects in hydrogen-related research. The Centre has also been very successful in securing external grants, including a grant of S\$8 million awarded recently to CHI under the Low Carbon Energy Research programme to conduct research on ammonia combustion.

CHI's new research facility will anchor the Centre's cutting-edge research while boosting its efforts in education and industry collaboration. Some state-of-the-art equipment featured in the facility include a four-channel reactor for carbon dioxide hydrogenation; a catalyst synthesis robot that automates the process of creating catalysts required for hydrogen-related research; prototyping, testing and characterisation tools; as well as a dedicated section for scientific work involving ammonia, which requires special handling and storage precautions.