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NEWS RELEASE

NANOFILM ENTERS INTO DEFINITIVE AGREEMENT WITH TEMASEK TO ESTABLISH SYDROGEN, MARKING STRATEGIC ENTRY INTO HYDROGEN ECONOMY

- ***Sydrogen expects to play a critical role in enabling the widespread adoption of hydrogen energy through Nanofilm's proprietary technologies that are integrated into the components and products of strategic partners in the value chain***
- ***As the world pivots decisively to fight climate change through sustainable renewable energy, Sydrogen holds leading advanced material technologies to unlock the promises of hydrogen as the lynchpin for the needed energy transition***

SINGAPORE, 19 July 2021 – Nanofilm Technologies International Limited (the "**Company**" or "**Nanofilm**", and together with its subsidiaries, the "**Group**"), a leading provider of nanotechnology solutions, today announced the entry into a definitive agreement with Temasek in relation to their joint venture ("**JV**") through Sydrogen Energy Pte. Ltd. ("**Sydrogen**", "**SEPL**"). With the combined resources of Nanofilm and Temasek, Sydrogen will leverage the Group's core technologies to develop new components and solutions to overcome existing limitations in enabling the use of hydrogen as an energy source, so as to bring about a greater and more widespread commercial adoption of hydrogen energy.

Under the JV Agreement, the total initial investment in Sydrogen is up to approximately S$140 million, comprising cash contribution of up to S$21 million by Nanofilm and the transfer of the Group's hydrogen energy business and licence of the Group's intellectual property relating to the business for a 65% shareholding, and cash contribution by Temasek for the remainder. The proceeds are intended to be used for research and development and the construction of production capacity.

Dr Shi Xu (史旭), Founder and Executive Chairman of the Company, said, "We are excited to partner Temasek in this strategic joint venture to tackle the global climate change crisis through technological solutions that enable the hydrogen economy. The combination of Nanofilm's technologies and Temasek's global network will help Sydrogen bring its advanced solutions to the hydrogen economy quickly and effectively.

We are pleased that Nanofilm is launching Sydrogen as an independent joint venture, in line with our strategic plan to expand into different end-markets, with our proprietary technologies and production capabilities to connect deep tech with the commercial world. Sydrogen also forms a key pillar of Nanofilm's group sustainability effort in supporting the United Nations Sustainable Development Goal of Affordable and Clean Energy."

Unlocking the Hydrogen Economy through Sydrogen

Sydrogen will execute all hydrogen energy businesses of Nanofilm. The first focus area will be the application of Nanofilm's proprietary Filtered Cathodic Vacuum Arc technology in the development of protective carbon coatings for metallic bipolar plates of fuel cells and electrolysers. This carbon coating that is similar to conductive diamond, with special material properties such as corrosion resistance, low resistivity, ion-leaching prevention, and high conductivity, is critical to manufacturing cost effective metallic bipolar plates.

Fuel cells and electrolysers are important building blocks in a hydrogen economy, but they have been plagued by cost and durability issues linked with bipolar plates. Bipolar plates which incorporate Sydrogen's advanced technologies, will enable a wide range of fuel cell and electrolyser systems with simpler designs, extended useful life, better heat control and greater power density to be commercialised. If successfully implemented and scaled, this will present a substantial growth potential and reduction of total cost of ownership. Promising areas of applications include passenger and commercial automotive, light powered mobility solutions and stationary power.

As a deep tech venture, Sydrogen will anchor its core research and development activities in Singapore and build up a Centre of Excellence to support its development and production roadmap in multiple targeted sites located close to customers and value

chains of interests. Specifically, Sydrogen sees China as an attractive market, with government policies strongly supporting the development of a hydrogen economy starting with fuel cell electric vehicles. Sydrogen also plans to invest significant effort to develop additional core component technologies in areas such as catalysts and hydrogen storage.

Partnerships and Technology Aggregation

Beyond the in-house developed technologies, Sydrogen looks to build an inclusive ecosystem, performing the role of a key technology aggregator to its strategic value chain partners, by combining synergies and complementary technologies.

Sydrogen has entered into a technology collaboration with Nanyang Technological University ("**NTU**") to license the latter's fuel cell associated intellectual property, with strong support from NTU's Professor Chan Siew Hua, an advocate of the hydrogen economy who has been working on hydrogen and fuel cell technology in the last 30 years, to research and develop novel catalysts and membrane-electrode-assembly for Proton Exchange Membrane Fuel Cell ("**PEMFC**") systems.

Professor Chan Siew Hua of NTU, said, "I am confident of this collaboration with Sydrogen and jointly commercialising and furthering research developed at NTU. This collaboration focuses on technology innovation, covering key components design and manufacturing, and the full characterisation of PEMFCs." He added, "Hydrogen is experiencing unprecedented momentum today. We should not miss this unique opportunity to make hydrogen and fuel cells an integral part of our clean and secure energy future."

New Leadership Appointments at Sydrogen

Mr James Rowan, Non-executive Non-independent Director of Nanofilm, will serve as Chairman of Sydrogen. Mr Rowan brings with him a wealth of experience from his earlier roles with leading technology and product companies, such as the Dyson Group (where he held various roles including Executive Director, Chief Operating Officer and Chief

Executive Officer) and BlackBerry Limited (later known as Research in Motion Limited) where he was the Chief Operating Officer (Global Operations).

Mr Dev Rudra will join as Chief Executive Officer of Sydrogen. Mr Rudra brings over two decades of global operating leadership experience in high technology engineered product companies like Pratt & Whitney and General Electric. A general manager and lean practitioner, Mr Rudra has held positions of increasing scope and responsibility in USA, Taiwan and Singapore. Most recently he was the Managing Director of General Electric Aviation's manufacturing and aftermarket service businesses in Singapore.

Mr Rudra, Chief Executive Officer of Sydrogen, said, "I am delighted to be part of the Nanofilm family and honored to be entrusted with the responsibility to lead Sydrogen. As our world pivots towards decarbonisation through sustainable energy including hydrogen, we believe Sydrogen holds the key advanced material technologies to help bring about this whole new world of possibilities."

ENDS

ABOUT NANOFILM TECHNOLOGIES INTERNATIONAL LIMITED

Listed on the Mainboard of Singapore Exchange Securities Trading Limited ("**SGX-ST**") on 30 October 2020, Nanofilm Technologies International Limited ("**Nanofilm**") is a leading provider of nanotechnology solutions in Asia, leveraging its proprietary technologies, core competencies in R&D, engineering and production, to provide technology-based solutions across a wide range of industries. Nanofilm's solutions serve as key catalysts in enabling its customers to achieve high value-add advancements in their end-products in an environmentally sustainable manner.

Nanofilm is a constituent of the FTSE ST China Index, FTSE ST Singapore Shariah Index, FTSE ST Large & Mid Cap Index, FTSE ST Mid Cap Index and the MSCI Singapore Small Cap Index.

ABOUT SYDROGEN ENERGY PRIVATE LIMITED

Sydrogen Energy is a Singapore headquartered joint venture between Nanofilm Technologies International and Temasek that is focused on the development and production of components and solutions to enable the hydrogen economy.

ABOUT TEMASEK

Temasek is an investment company with a net portfolio value of S$381 billion (US$283b) as at 31 March 2021. Our Temasek Charter defines our three roles as an Investor, Institution and Steward, and shapes our ethos to do well, do right, and do good. As a provider of catalytic capital, we seek to enable solutions to key global challenges. We deploy financial capital to stimulate innovation and growth; develop human capital to uplift capabilities and enhance potential; enable natural capital and foster sustainable solutions for the climate and a better living environment; and seed social capital to transform lives for a more inclusive and resilient world. Sustainability is at the core of all that we do. We actively seek sustainable solutions to address present and future challenges, as we

capture investible opportunities to bring about a sustainable future for all. For more information on Temasek, please visit www.temasek.com.sg

This media release is issued on behalf of Nanofilm Technologies International Limited by Citigate Dewe Rogerson. For media queries, please contact:

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