SUNGREENH2 Closes US$ 2,000,000 Seed Funding Led by SGInnovate

August 17, 2022, 8:00AM ET, Singapore: Singapore based cleantech company SunGreenH2 announced today that it has raised a $2M seed round led by SGInnovate with participation from Vinci VC, Cap Vista, Entrepreneur First, SOSV’s HAX, she1K, T. Chen Fong and Apsara Investments. This news comes alongside the announcement of a grant award the company recently received as part of the $8 million partnership between the Energy Market Authority (EMA) and Shell in Singapore.

SunGreenH2 is on a mission to unlock low cost green hydrogen production. A carbon-free alternative to fossil-fuel manufactured hydrogen, green hydrogen uses clean energy sources like wind and solar to power electrolysis, the process that splits water into pure hydrogen and oxygen. The major bottleneck for green hydrogen production today is that most electrolyser systems are either energy inefficient or rely too heavily on precious metals like iridium and platinum, which are loaded into catalytic electrodes, a key component of electrolysis systems.

SunGreenH2’s technology utilizes unique proprietary nanostructured electrodes that dramatically increase available surface area for water contact during the splitting reaction for a given size of active area, increasing current density output by almost 2x while lowering precious metal loadings and energy use. In this case reducing the use of platinum group metals by an order of magnitude lower than the current industry standard means the materials can be scaled up sustainably from a mass-manufacturing perspective. The technology is applicable to almost all commercially available electrolysers today, offering a much-needed pathway to lowering green hydrogen cost for wide-scale adoption in industry and other promising applications which cannot directly be electrified with renewables.

“We are focusing on creating affordable green hydrogen, which will have a long term impact in driving overall hydrogen prices downwards. By providing more advanced technology than what is currently available, SunGreenH2 makes possible mass-scale up of electrolysers by directly causing electrolyzer manufacturers to compete more effectively in the distributed hydrogen stack. This opens the door to widespread adoption of green hydrogen in industry, transport, and long duration energy storage. Our aim is to unlock sustainable, scalable, affordable green hydrogen production globally.” - Tulika Raj, co-founder and CEO of SunGreenH2.

“An added benefit to SunGreenH2’s electrolyzer cell is its stable material composition, which can be easily sourced and produce up to twice as much hydrogen from a given electrolyser cell size, leading to halving of stack size and material costs as well as space requirement. This is an especially relevant design solution for space constrained economies like Singapore and for green hydrogen use in urban environments.” - Saeid Masudy Panah, co-founder and CTO of SunGreenH2

“We believe that SunGreenH2’s innovative products will contribute to advancements in hydrogen production, greatly increasing the viability of hydrogen as an accessible source of clean energy to meet our future needs. With decarbonisation becoming a critical global priority, we remain focused on supporting companies that leverage emerging technologies to bring us closer to making the hydrogen economy a reality,” said Hsien-Hui Tong, Executive Director – Investments, SGInnovate. “As an investor and partner...
in SunGreenH2’s growth journey, SGInnovate is looking forward to working closely with the team to help the company achieve their full potential."

Hydrogen production today is a significant contributor to CO\(_2\) emissions, owing mostly to its associated energy-intensive production processes, which are still heavily reliant on fossil fuels. The company is conducting trials of its materials with leading global electrolyser OEMs, and its prototype electrolyser cell is currently under demonstration at A*STAR’s Institute of Materials Research and Engineering. As demand for its solution increases, the company has explored opportunities with major players in the green hydrogen market in Singapore, EU, North America, Japan and India. The seed funding will go to setting up SunGreenH2’s first manufacturing facility to meet the demands of their early partners.

“We’re currently collaborating with major electrolyser manufacturers in Asia Pacific, Europe and North America, and have pilot projects secured,” confirms Ms Raj. “This strong interest is not surprising when you consider that the growth of the global electrolyser market is exponential – by 2030, it’s expected to be 500 times larger than it was just a few years ago.”

“Producing green hydrogen from electrolysis has had a whole host of barriers to adoption ranging from high costs to low efficiency and risky supply chains. SunGreenH2’s technology addresses each of those bottlenecks, allowing for a scalable and efficient model for green hydrogen production.” - Duncan Turner, General Partner of SOSV’s HAX

Vinci’s Principal Investor Duran Cesur commented: “We are very excited to have invested in SunGreenH2, which has developed a key technology in making green hydrogen cost competitive with grey/blue hydrogen. Tulika and Saeid are visionary founders operating in a crucial market for the green transition. Together with Vinci’s expertise and connections in the energy sector, we are confident that SunGreenH2 will demonstrate strong growth in the near future and disrupt the electrolyser market.”

SunGreenH2’s journey began in 2020, when experienced commercial leader Tulika Raj met award-winning multidisciplinary scientist Dr. Saeid Masudy Panah in Singapore. Tulika has previously scaled renewable energy companies and led large project investments at renewable funds. Saeid has invented a series of electrodes for water splitting with a performance that exceeds anything else available in the market - the accumulation of several years of research and combining several of his inventions. From the outset the pair were working on a hypothesis that net-zero targets, which now cover 80% of GDP globally, cannot be met without urgent acceleration of innovation in areas like green hydrogen. Since direct renewable electrification can only address 25% of global CO\(_2\) emissions, 75% of global CO\(_2\) emissions which come from heavy industries, like refining, shipping and aviation, cannot be directly electrified with renewables and will need green hydrogen to decarbonize. The company has previously received non-dilutive funding from NTU Ecolabs and Startup SG in Singapore. In 2020, the team received pre-seed funding from talent investor Entrepreneur First and SOSV’s HAX, an early stage hard tech investor with a significant portfolio in the climate tech space.

“Cap Vista is confident that SunGreenH2’s technology and world-leading efficiency will revolutionize hydrogen production. They are critical in the global drive towards net zero goals, and the team is in a great position to power these efforts.” - Eunice Ooi, CEO of Cap Vista

“Entrepreneur First is honored to be a part of SunGreenH2’s founding story. Since Tulika and Saeid met on our eighth cohort, they’ve moved with urgency and ambition towards their goal of transforming hydrogen production at scale. This new milestone brings them closer to revolutionizing zero emissions, and unlocking a greener future ahead.” - Bernadette Cho, Partner, Entrepreneur First Singapore

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About SunGreenH2
SunGreenH2 is an award-winning company advancing the hydrogen economy with breakthrough technology for affordable green hydrogen production. SunGreenH2’s core components for electrolyser, fuel cells, batteries and solar-hydrogen panels provide significant performance, cost and durability advantages for these energy transition materials. SunGreenH2 manufactures electrodes, porous transport layers and bipolar plates that dramatically increase hydrogen production from all electrolyser whilst utilizing significantly lower amounts of precious metals and reducing energy consumption. Leveraging over ten years of cutting edge research in electrochemistry and nanotechnology carried out in Singapore, today the company is working with leading global electrolyser OEMs and hydrogen end users to bring its products to market.

For more information about how SunGreenH2 is driving a breakthrough in net zero emissions by unlocking affordable green hydrogen, visit www.sunngreenh2.com.

About SGInnovate
At SGInnovate, we build and scale Deep Tech startups into high potential companies with global impact. We believe that hard global problems can be solved using Deep Tech, and Singapore, where we are based, is uniquely positioned to realise Deep Tech innovations that can tackle these challenges. We focus on adding tangible value to the Deep Tech startup ecosystem in two key areas – development of Human Capital and deployment of Investment Capital. With the support of our partners and co-investors, we back entrepreneurial scientists through equity-based investments, access to talent and business-building advice. Our efforts are prioritised around emerging technologies such as Advanced Manufacturing, AgriFood, Healthcare and Biomedical Sciences and Sustainability, which represent impactful and scalable answers to global challenges.

SGInnovate is a private-limited company wholly owned by the Singapore Government. For more information, please visit www.sginnovate.com.

About SOSV
SOSV is a global venture capital firm that operates early stage startup development programs: HAX for hard tech, Indiebio for life sciences, Orbit Startups for emerging market internet, and Dlab for blockchain. SOSV’s programs invest into roughly 135 new companies each year. As of July 2022, SOSV had more than 1,000 portfolio companies and over $1.3B in assets under management.

About Vinci Venture Capital
Vinci invests in early-stage technology companies primarily in Turkey, Germany, and United Kingdom with a focus on mobility, supply chain, energy storage/management and industry 4.0 sectors. Beyond investing, Inci Holding’s strategic investor Vinci aims to add value to the ventures in its portfolio as a true strategic partner with its corporate resources and industrial experience. For more information, please visit www.vincivc.com.

About Cap Vista
Cap Vista is the strategic investment arm and fully-owned subsidiary of the Defence Science and Technology Agency (DSTA), a statutory board under Singapore’s Ministry of Defence. The organisation seeks out aspiring entrepreneurs creating deep tech companies with potential dual-use applications for defence and security, and works together with defence partners and the greater start-up ecosystem to nurture and grow these companies.

About Entrepreneur First
Entrepreneur First (EF) is the best place in the world to meet your co-founder and build a startup from scratch. Every six months, in six countries around the world, EF bring together and fund exceptional individuals to help them meet their co-founder, develop an idea and raise money from leading investors - as fast as possible. The companies built at EF are now worth over $10bn. EF is backed by some of the world’s best tech founders and company builders, including Patrick and John Collison (Stripe); Reid Hoffman (LinkedIn), Tom Blomfield (GoCardless and Monzo), Sara Clemens (Pandora and Twitch); Nat Friedman (GitHub); and Matt Mullenweg (Wordpress).