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PRESS RELEASE

Joint press release of Integrative Nanotech and the Fraunhofer Institute for Surface Engineering and Thin Films IST

German Minister Robert Habeck and Canadian Minister Jonathan Wilkinson show support for Canada-Germany co-innovations in the hydrogen industry

Integrative Nanotech: A Fraunhofer spin-off revolutionizes hydrogen leak detection

Halifax, Canada and Braunschweig, Germany, May 14th, 2024 – Integrative Nanotech, a dynamic spin-off from the renowned Fraunhofer Institute for Surface Engineering and Thin Films IST, has joined forces with its parent institution to revolutionize hydrogen leak detection. This strategic partnership will significantly accelerate the development of next-generation hydrogen leak detection systems and prove their production methods on industrial-scale production systems. The collaboration aims to propel the hydrogen-powered transportation sector into a safer and more efficient future.

Next-Generation Hydrogen Leak Detection Systems

Hydrogen, as a clean and versatile energy carrier, holds immense promise for decarbonizing our global economy. However, ensuring its safe handling and transport remains a critical challenge. Integrative Nanotech and Fraunhofer IST recognize this urgency and have embarked on a joint mission to develop cutting-edge leak detection solutions with a focus on improving detection standards, and device reliability.

Exclusive Licensing Agreement and R&D Partnership

The heart of this collaboration lies in the exclusive licensing agreement recently finalized between Integrative Nanotech and Fraunhofer IST. By leveraging Fraunhofer's extensive facilities and expertise, Integrative Nanotech gains unprecedented access to advanced technologies, and expertise in thin-film processes, production systems, and process upscaling.

IN COOPERATION WITH

Integrative Nanotech

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International Synergy: Canada and Germany

Building upon the established Canada-Germany Hydrogen Alliance agreement which was signed at the site of Canada's leading Green Hydrogen Project, Project Nujio'qonik in Stephenville, NL on August 23, 2022, this collaborative partnership exemplifies tangible progress within the sector. By fostering innovation and safety, it not only fuels industry growth but also fortifies the bond between Canada and Germany. Both nations share a commitment to sustainable energy solutions, and this partnership exemplifies their dedication.

Advancing Hydrogen-Powered Transportation

The hydrogen-powered transportation sector stands to benefit significantly from this collaboration. By enhancing leak detection accuracy, reliability, and speed, Integrative Nanotech and Fraunhofer aim to boost confidence in hydrogen infrastructure. Whether it's fuel cell vehicles, hydrogen refueling stations, or industrial applications, this breakthrough promises safer operations and accelerated adoption.

Dr. Volker Sittinger (Left, Fraunhofer IST) and Dr. Hunter King (Right, Integrative Nanotech) finalizing agreements to develop high performance hydrogen sensors for leak detection applications.
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Quotes from Key Stakeholders

Jonathan Wilkinson, Canadian Federal Minister of Energy and Natural Resources: "Canada and Germany have a long-standing friendship and determination to work together to address climate change, accelerate the global energy transition and strengthen international energy security. Canada has decades of experience in hydrogen innovation and is a global leader in hydrogen fuel cell technology and renewable energy. Today's announcement speaks to the collaborative partnership between our two countries that is accelerating international work on hydrogen on a tangible level, with the joint goal of achieving sustainable energy solutions. Canada is pleased to reiterate its position as a global supplier of choice for clean energy, and we are looking forward to seeing the Integrative Nanotech project enable the creation of sustainable jobs, clean economic growth, emission reductions and energy security at home and abroad."

Robert Habeck, German Federal Minister for Economic Affairs and Climate Action: "Minister Wilkinson and I have met several times to actively support and engage in the German-Canadian energy partnership. Integrative Nanotech and Fraunhofer demonstrate today how international cooperation not only contributes to our goals of a bilateral green hydrogen trade and the creation of an efficient carbon free global markets but also how this cooperation drives solutions that will make this market truly safe and sustainable."

Karina Häuslmeier, Chargée d'Affaires a.i, German Embassy Ottawa: "The creation of this new partnership to foster safety in the evolving global hydrogen market underlines: the German Canadian Hydrogen Alliance founded in August 2022 in Stephenville has laid the groundwork for transatlantic business opportunities in the hydrogen sector. It is encouraging to see how Germans and Canadians drive innovation to make the energy transition a reality."

Tory Rushton, Nova Scotia Minister of Natural Resources and Renewables: "Green hydrogen is a game changer for Nova Scotia and has great potential for us and our global partners to reach climate change goals. We're building this industry from the ground up in our province and it takes a lot of innovation to make that happen, including critical safety systems and infrastructure. We're proud of the work spurred by Nova Scotia's own Hunter King that reflects the strong partnership between Canada and Germany to move off fossil fuels and toward a clean, sustainable future."

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Prof. Dr. Christoph Herrmann, Director of Fraunhofer Institute for Surface Engineering and Thin Films IST: "The creation of a company such as Integrative Nanotech is an excellent example of the innovative power of the Fraunhofer-Gesellschaft and its research teams. We are proud of our alumnus Hunter King, who as an outstanding scientist and entrepreneur not only embodies the Fraunhofer spirit, but also demonstrates how our technologies find their way into the marketplace and create value for business and society. We look forward to future cooperation."

Dr. Hunter King, CEO of Integrative Nanotech: "We're thrilled to be working with Fraunhofer on this cutting-edge technology. This collaboration is a prime example of the strength that international partnerships bring to tackling global challenges like climate change. At Integrative Nanotech, we're especially proud that our office and operations are based right here in Atlantic Canada. This project shows that world-leading solutions to fight climate change can be developed right here in our region."

Integrative Nanotech would like to express its sincere gratitude to the National Research Council of Canada's Industrial Research Assistance Program (IRAP) and the Nova Scotia Department of Environment and Climate Change for their invaluable support. Their financial and strategic contributions have been instrumental in the development of this groundbreaking technology. We are thankful for their continued commitment to fostering innovation and tackling climate change challenges.

Dr. Volker Sittinger (Left, Fraunhofer IST), and Dr. Hunter King (Right, Integrative Nanotech) signing their exclusive licensing and framework agreements for their international co-innovation. © Integrative Nanotech

About Integrative Nanotech

Integrative Nanotech, a spin-off from the Fraunhofer Institute for Surface Engineering and Thin Films IST, is a pioneering company specializing in high-performance hydrogen sensors for safety systems in critical applications. Leveraging cutting-edge nanomaterials, they are at the forefront of developing the next generation of hydrogen sensors for leak detection solutions.

www.integrativenanotech.com

About Fraunhofer Institute for Surface Engineering and Thin Films

The Fraunhofer Institute for Surface Engineering and Thin Films IST is a global leader in applied research. It opens up the potential for future-oriented products and the associated competitive and scalable production systems. Its research covers plant engineering, entire process chains from process engineering, process technology and manufacturing technology to the consideration of entire factories. Based on the requirements of sustainability, an overview of the entire product life cycle is maintained – from the material, through the manufacturing process the component and product to recycling.

https://www.ist.fraunhofer.de/en.html

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