

Avantium and TNO partner to manufacture electrolyser test stations for green hydrogen production

AMSTERDAM, 15 April 2024, 18:00 hrs CEST – Avantium N.V., a leading company in renewable and circular polymer materials, today announces that its subsidiary Avantium R&D Solutions has signed a partnership agreement with The Netherlands Organisation for Applied Scientific Research (TNO) for the manufacturing of PEM (proton exchange membrane) electrolyser test stations. The PEM electrolyser is the key technology for the production of green hydrogen.

Under the partnership with TNO, Avantium will get access to TNO's technical knowledge and expertise - including design and software – on single-cell and multi-cell lab-scale electrolysis test stations. With this knowledge, Avantium will manufacture, further develop, and sell these electrolyser test stations to customers worldwide. This will allow Avantium R&D Solutions to accelerate its electrolysis offering and expand its activities in the development of green hydrogen technologies.

Avantium R&D Solutions offers innovative and tailored R&D products and contract R&D for selected sustainable chemistry markets. One of those areas is electrolysis for the production of green hydrogen. TNO is a globally recognized leader in research and innovation in various fields, including energy, sustainability, and technology. In the field of electrolysis, TNO has worked in the past years on improving the efficiency, scalability, and cost-effectiveness of electrolysis processes. TNO has developed single-cell and multiple cells PEM electrolysis test stations with multiple generations of improvements and has obtained unique expertise in this field.

TNO and Avantium intend to further develop and improve these PEM electrolyser test stations. Avantium will bring in its uniquely innovative expertise in accelerating R&D, manufacturing and commercial skills, while using the know-how of TNO on electrolysis test units.

Richard Braal, Division Director Industry at TNO Energy and Materials Transition, comments: "We are pleased to partner with Avantium and we see this as a first step towards a stronger collaboration with Avantium to jointly develop technologies and services to accelerate the energy transition in the chemical industry. This is a strong collaboration of two Dutch based and internationally operating parties and a nice example of where realizing the energy and materials transition can go hand in hand with increasing the export potential of industry".

Lennart van der Burg, Cluster Manager Green Hydrogen at TNO, adds: "There is globally a large need for reliable high-performing electrolyser test stations in order to accelerate innovation, product development and securing safe operation of electrolyser technology. With the significant quantities of green hydrogen necessary for the energy transition, there is an imperative to significantly increase the capacity for green hydrogen production via electrolysis in the coming decade."

Steven Oliver, Managing Director of Avantium R&D Solutions, says: "We believe that this partnership with TNO brings together two recognized leaders in R&D and innovation to help industry to accelerate the development of electrolysis to manufacture green hydrogen. Currently, existing electrolysis technologies and manufacturing capabilities are insufficient to meet projected demand in the coming years. We believe we can serve the need to scale up electrolyser capacity while enhancing the technology's design with our expertise on manufacturing custom-made, innovative R&D units. This fits well within the purpose of Avantium: to help transition the chemical industry to sustainable and circular solutions."

About Avantium

Avantium is a pioneering commercial-stage company focused on renewable & circular polymer materials. Avantium develops and commercialises innovative technologies for the production of materials based on sustainable carbon feedstocks, i.e. carbon from biomass or carbon from the air (CO₂). The most advanced technology is the YXY[®] Technology that catalytically converts plant-based sugars into FDCA (furanedicarboxylic acid), the key building block for the sustainable plastic PEF (polyethylene furanoate). Avantium has successfully demonstrated the YXY[®] Technology at its pilot plant in Geleen, the Netherlands, and is currently constructing of the world's first commercial plant for FDCA, with large-scale production of PEF expected in 2024. Avantium also provides R&D solutions in the field of sustainable chemistry and is the leading provider of advanced catalyst testing technology and services to accelerate catalyst R&D. Avantium works in partnership with like-minded companies around the globe to create revolutionary renewable chemistry solutions from invention to commercial scale.

Avantium's shares are listed on Euronext Amsterdam and Euronext Brussels (symbol: AVTX). Avantium is incorporated in the Euronext Amsterdam SmallCap Index (AScX). Its offices and headquarters are in Amsterdam, the Netherlands.

About TNO

TNO is the largest independent research and technology organization in the Netherlands and one of the largest in the EU. We innovate, investigate, and orchestrate, collaborating closely with governments, universities and the private sector. We inform government on policies and empower evidence-based decision-making through rigorous investigations, cutting-edge scientific insights, and reliable measurements. By building national and international consortia and ecosystems, we drive technological and methodological breakthroughs that help to realise a secure, sustainable, healthy, and digital society, and strengthen the earning power of the Dutch economy.
<https://www.tno.nl/en/>

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