

Avantium awarded funding to produce lignin for the development of bio-based asphalt

AMSTERDAM, 23 April 2020, 07:00 CET – Avantium N.V., a leading technology company in renewable chemistry, announces that the Netherlands Enterprise Agency (Rijksdienst voor Ondernemend Nederland) has awarded the company €0.5 million for its participation in the CHAPLIN XL* project.

The CHAPLIN XL project is a collaboration between multiple industrial and academic parties. The aim of the collaboration is to test a new approach to substantially reduce CO₂ emissions from road construction by using lignin as a substitute for fossil-based bitumen in asphalt.

Avantium is a forerunner in developing and commercialising innovative technologies for the production of plant-based chemicals and materials. One such innovation is Dawn Technology™ that converts non-food plant-based feedstock into industrial sugars and lignin. In 2018, Avantium opened a pilot biorefinery for Dawn Technology™ operating in the Netherlands.

Lignin is a main constituent of woody biomass and is well suited for energy generation. It is also suitable for many higher value applications including asphalt for road construction. Asphalt is conventionally made using bitumen derived from crude oil.

Zanna McFerson, Managing Director of Avantium Renewable Chemistries, said: “Plant-based lignin is a highly effective natural binder and can be an excellent replacement of fossil-based bitumen in asphalt. Our involvement in CHAPLIN XL allows us to demonstrate that our plant-based lignin works effectively at scale allowing for a significant reduction in the carbon footprint of road construction”.

The CHAPLIN XL project will test the lignin-based asphalt at large scale by paving four test roads in the Netherlands during 2020. These include a section of road at Groningen Seaports in the north of the Netherlands. ‘Dawn Drive’ as it is referred to by Avantium will be constructed by Roelofs Groep and is made from lignin produced by Avantium’s Dawn pilot biorefinery in the area.

* The CHAPLIN XL project members comprise academic and industrial organisations. Besides Avantium, other project members are Utrecht University, Wageningen Food & Biobased Research, Asfalt Kennis Centrum, H4A Infratechniek, Roelofs Groep and Stichting Biobased Delta

About Avantium

Avantium is a leading technology development company and a forerunner in renewable chemistry. Avantium develops novel technologies based on renewable carbon sources as an alternative to fossil-based chemicals and plastics. The company currently has three technologies at pilot and demonstration phase. The most advanced technology is the YXY® plant-to-plastics-technology that

catalytically converts plant-based sugars into a wide range of chemicals and plastics, such as PEF (polyethylene furanoate). Avantium has successfully demonstrated the YXY Technology® at its pilot plant in Geleen, the Netherlands. The second technology is the Dawn Technology™ that converts non-food biomass into industrial sugars and lignin in order to transition the chemicals and materials industries to non-fossil resources. In 2018, Avantium opened the Dawn Technology™ pilot biorefinery in Delfzijl, the Netherlands. The third technology is called Ray Technology™ and catalytically converts industrial sugars to plant-based MEG (mono-ethylene glycol). Avantium is scaling up its Ray Technology™ and the demonstration plant in Delfzijl, the Netherlands opened on November 7, 2019. Next to developing and commercialising renewable chemistry technologies, the company also provides advanced catalysis R&D services and systems to customers in the refinery and chemical industries. Avantium works in partnership with likeminded 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 included in the Euronext Amsterdam SmallCap Index (AScX). Its offices and headquarters are in Amsterdam, the Netherlands.

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