BioBTX and partners produce Sustainable Graphite and Jet from crude glycerol

BioBTX, a pioneering developer of renewable aromatics technology in the Netherlands, has together with NC State University, NREL and BIRLA Carbon found a novel production route for SAF and synthetic graphite. The novel production route explores the valorization of poly aromatic hydrocarbons (PAH) produced out of crude glycerol via the BioBTX ICCP technology, into SAF and synthetic graphite. The resulting bio-graphite exhibits excellent performance in lithium-ion battery configurations.

By converting plastic waste and biomass into renewable aromatics, BioBTX is spearheading the creation of a circular chemical industry, significantly reducing carbon emissions and reliance on fossil fuels. Aromatics, essential for producing every-day products like insulating foams, coatings, PET bottles, batteries, and pharmaceuticals, will now have a sustainable alternative to fossil-based sources, presenting a major opportunity for circular business models.

The presented study explores a novel valorization pathway for PAH-rich aromatic oil, by transforming them into battery-grade graphite and sustainable aviation fuel. The research was performed together with North Carolina State University, the National Renewable Energy Laboratory (NREL), Birla Carbon and BioBTX. Through the upcycling of the PAH-fraction into products for high value applications, not only the circularity level of the plastic waste and biomass recycling increases, also the strategic dependence of graphite can be decreased.

Ton Vries, CEO of BioBTX, says: "We are excited about this novel production process and additional use of the aromatics. This not only increases the overall application of our aromatic oil, but can also significantly contribute to achieving a circular economy. We are looking forward to explore the next steps for realizing a circular graphite value chain.

About BioBTX

BioBTX is a leading circular chemistry technology developer that makes it possible to replaces fossil resources for biomass & plastic waste. BioBTX uses these renewable resources for the production of drop-in chemicals and aromatics via its inhouse developed ICCP technology to enable the production of sustainable and future proof materials. BioBTX has successfully demonstrated the ICCP technology on its Pilot Plant in Groningen, the Netherlands and is working on the realisation of its first commercial scale plant. BioBTX mission is to make circular chemistry possible by developing technologies contributing to the circular economy. BioBTX offices are located in Groningen, the Netherlands.

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