Butanol for sustainable aviation

Junicke, Helena; Flores-Alsina, Xavier; Gernaey, Krist V.

Publication date: 2018

Document Version
Peer reviewed version

Citation (APA):

General rights
Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.
Workshop title:
Sustainable Aviation Fuel - Workshop 2018: Nordic SAF leadership? - Policies, technology options, research needs and markets

Workshop scope:
International

Workshop date:
20.11.2018

Workshop place:
Copenhagen, Denmark

Workshop URL:

Title of talk:
Butanol for sustainable aviation

Authors:
Helena Junicke (Invited speaker), Xavier Flores-Alsina, Krist V. Gernaey

Abstract:
Butanol is a four-carbon alcohol suited for the production of road and jet fuel. The ATJ-SPK (alcohol-to-jet synthetic paraffinic kerosene) pathway aims to obtain paraffinic kerosene from C2-C4 alcohols. The ASTM already approved the pathway for iso-butanol and ethanol with a blending certification of up to 30% and 50%, respectively. ABE fermentation would be the classical choice for bio-based butanol production, but high glucose requirements create competition with food production and raise concerns over sustainable land use. GreenLogic is a project recently initiated at DTU PROSYS to investigate butanol production from municipal waste streams and concentrated industrial effluents to counter such concerns. In this talk, we will highlight some of the challenges and opportunities that butanol is facing on a path to more sustainable aviation.