

Bio4Fuels Days 2024



Radisson BLU Seaside Hotel Helsinki (Photo: RADISSON BLU)

12 - 13 June 2024, Helsinki, Finland

The Final Conference Organized by the FME Centre Bio4Fuels



Norwegian Centre for
Environment-friendly
Energy Research

**Conference Venue**

Radisson BLU Seaside Hotel

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VTT's FutureHub2 industrial biotechnology infrastructure. Photo source: VTT.

Welcome!

Sustainable transport fuels are a key part of the green transition towards meeting the 2030 and 2050 ambitions. To meet these ambitions, all major barriers for technologies and value chains must be addressed.

This Bio4Fuels annual conference will focus on the key objective of sustainable biofuel implementation prospects in Norway and Finland. It brings together researchers, industry specialists and policymakers to review the status of bioenergy deployment, analyze the future of sustainable biofuel production and use in Europe, and connect sectorial expertise with a view to supporting sustainable biofuel production and greenhouse gas mitigation.

It is important to recognize that industry, policy and research co-align along common interests and objectives. The conference wishes to facilitate networking and bridge gaps between different research and business areas, parts of the biofuel production value chain, and also, of course, country borders.

We hope you enjoy the conference!



Duncan Akporiaye
Centre Leader



Svein Horn
Deputy Centre Leader

About Bio4Fuels

A Centre for Environment-friendly Energy Research (FME) based at the Norwegian University of Life Sciences and lead by SINTEF. The Centre aims to develop innovative technology and support industries to realize economic and sustainable conversion of lignocellulosic biomass and organic residues to transportation fuels, along with added value chemicals, heat, and power.

The Norwegian Research Council is the main financier of FME Bio4Fuels, together with the stakeholders.

Bio4Fuels Industrial and public stakeholders



Conference Program

Wednesday 12 June

Meeting rooms Valimo 1-3, Radisson BLU Seaside Hotel, Helsinki

Moderator: Duncan Akporiaye, Centre Leader Bio4Fuels

	WELCOME AND OPENING SPEAKERS Room: Valimo 1-3
09.00	Welcome to Bio4Fuels Days! <i>Duncan Akporiaye, Centre Leader Bio4Fuels</i> Opening speakers 09:10 – 09:30 NESTE: Industrial Perspective to Innovation, Susanna Forssell 09:30 – 09:50 Silva Green Fuel , Klaus Schöffel 09:50 – 10:10 TNO Energy Systems , André Faaij 10:10 – 10:30 VTT's strategy on producing fuels and chemicals from CO ₂ , Tom Granström
10:30	COFFEE BREAK
11:00	Room: Valimo 1-3 FOCUS: Bioresources, Environment and Climate. Chair: Francesco Cherubini, NTNU 11:00 – 11:30 Luke - Natural Resources Institute Finland , Antti Asikainen 11:30 – 11:40 <i>SP Leader introduction</i> , Francesco Cherubini, NTNU 11:40 – 12:05 <i>Climate change effects of advanced biofuel production in Norway optimized for aviation or shipping</i> , Vedant Ballal, NTNU 12:05 – 12:30 <i>Biofuels and Climate Mitigation: A Prospective Approach for Maritime Transport in Norway and Europe</i> , Marcos D. B. Watanabe, NTNU
12:30	LUNCH BREAK, Bistro Gimis , Radisson BLU Seaside Hotel
13:30	FOCUS: Liquefaction Processes. Chair: Judit Sandquist, SINTEF 13:30 – 14:00 Valmet , Tero Joronen 14:00 – 14:10 <i>SP Leader introduction</i> , Judit Sandquist, SINTEF 14:10 – 14:35 <i>Continuous vs. Batch hydrothermal liquefaction of Nordic biomass</i> , Nikalet Everson, SINTEF Energy 14:35 – 15:00 <i>Coproduction of biocarbon and biogas transportation fuel by combining pyrolysis and anaerobic digestion</i> , Kai Toven, RISE-Pfi
15:00	COFFEE BREAK
15:20	FOCUS: Biochemical Processes. Chair: Aniko Varnai, NMBU 15:20 – 15:50 Industry: Q Power , Anni Alitalo 15:50 – 16:00 <i>SP Leader introduction</i> , Aniko Varnai, NMBU 16:00 – 16:25 <i>Fermentation-based approaches for the production of biofuels and value-added chemicals</i> , Volha Shapaval, NMBU 16:25 - 16:50 <i>Anaerobic digestion and biogas upgrading, status and perspective</i> , Lu Feng, NIBIO
16:50	BREAK
17.30	POSTER SESSION AND NETWORKING COMBINED WITH SNACKS AND DRINKS Room: Visio
19.00	DINNER, Radisson BLU Seaside Hotel Room: Valimo 1-3

Thursday 13 June

Meeting rooms Valimo 1-3, Radisson BLU Seaside Hotel Helsinki

Moderator: Svein Jarle Horn, Deputy Centre Leader Bio4Fuels

08:30	PLENARY SESSION, Room: Valimo 1-3
	Introduction to Day 2 Janne Beate Utåker, Administrative Coordinator Bio4Fuels
08:40	FOCUS: Gasification Processes Chair: Morten Seljeskog, SINTEF 08:40 – 09:10 thyssenkrupp Uhde , Claudio Marsico 09:10 – 09:20 <i>SP4 Gasification Processes: Summary – 8 years in 8 minutes</i> – Morten Seljeskog 09:20 – 09:45 <i>Gasification activities at USN and strategies for implementation of full-scale Plants in Norway</i> , Nabin Aryal, USN 09:45 - 10:10 <i>Gas conditioning and catalytic conversion</i> , Edd A. Blekkan, NTNU
10.10	COFFEE BREAK AND HOTEL CHECK OUT
	FOCUS: Process Design and End Use. Chair: Bernd Wittgens, SINTEF 10:30 – 11:00 Wärtsilä , Kaj Portin 11:00 – 11:10 <i>SP Leader introduction</i> , Bernd Wittgens 11:10 – 11:35 <i>Fuel transition strategies to achieve real emissions reductions in shipping</i> , Anders Valland, Sintef Ocean 11:35 – 12:00 <i>Modelling of an integrated biorefinery for spruce valorization and preliminary Techno economic assessment</i> , Matteo Gilardi, SINTEF Industry
12. 00	Wrap up by Svein Horn, NMBU
12.15	LUNCH BREAK, Bistro Gimis , Radisson BLU Seaside Hotel
13.00	Site Visit to VTT Group 1: Bus to VTT Bioruukki Group 2: Bus to VTT FutureHub2 Same bus. Separate programs. Luggage can be stored on the bus.
15.30	Bus Transport to Helsinki - Vantaan Airport



Lounge area, Radisson BLU Seaside Hotel, Helsinki. Photo: Radisson.

Poster titles and presenters

Poster Session: 12 June 17:30 – 19:00 Meeting Room Visio

No.	Title	Presenter
1	<i>Effects of free ammonia nitrogen on in-situ biomethanation and microbial communities</i>	Aryan Bhusal, USN / NIBIO
2	<i>Oxidative Ethanol Dry Reforming Over Co/Al₂O₃ Catalyst For Syngas Production</i>	Fahim Fayaz, Tampere University
3	<i>Chemical Looping Gasification: A better alternative to conventional systems?</i>	Avishek Goel, Tampere University
4	<i>Sustainable Management of Sewage Sludge using Hydrothermal Process</i>	Tan Vo, Tampere University
5	<i>2-Naphthol impregnation prior to steam explosion promotes LPMO-assisted enzymatic saccharification of spruce and yields high-purity lignin</i>	Anikó Várnai, NMBU
7		
8		
9		

Conference participants list

*moderator, speaker, chair

Organisation	Name	
Aalto University	Kristiina	Kruus
Hyperthermics AS	Elias	Liavaag
IFE	Ljubisa	Gavrilovic
Lappeenranta-Lahti University of Technology (alumni)	Takunda	Malunga
Luke	Antti	Asikainen
*Neste	Susanna	Forssell
Neste	Ekaterina	Sermyagina
*NIBIO	Lu	Feng
NIBIO	Heikki	Korpunen
Norwegian Institute of Bioeconomy Research	Aryan	Bhusal
NMBU	Cristian	Bolaño Losada
NMBU	Hans Fredrik	Hoen
*NMBU	Svein	Horn
*NMBU	Volha	Shapaval
*NMBU	Janne Beate	Utåker
*Norwegian University of Life Sciences (NMBU)	Aniko	Varnai
*NTNU	Vedant	Ballal
*NTNU	Francesco	Cherubini
*Norwegian University of Science and Technology (NTNU)	Edd Anders	Blekkam
*Norwegian University of Science and Technology (NTNU)	Marcos	Watanabe
NovelYeast bv	Varghese	Saju
*RISE PFI	Kai	Toven
Silva Green Fuel	Stian	Nilsen
Silva Green Fuel	Svein Ove	Slinde
*Silva Green Fuel DA	Klaus	Schjøffell
*SINTEF	Duncan	Akporiaye
SINTEF	Haldis	Watson
SINTEF	Carlos	Dinamarca
*SINTEF	Matteo	Gilardi
*SINTEF	Bernd	Wittgens
*SINTEF Energy Research	Morten	Seljeskog
*SINTEF Energy Research	Nikalet	Everson
*SINTEF Energy Research	Judit	Sandquist
*SINTEF Ocean	Anders	Valland
Tampere University	Babak	Arjmand
Tampere University	Fahim	Fayaz
Tampere University	Avishek	Goel
Tampere University	Tan Phat	Vo
*thyssenkrupp Uhde	Claudio	Marsico
*TNO, Utrecht University, Univ. of Groningen	André	Faaij
*University of South-Eastern Norway	Nabin	Aryal
University of South-Eastern Norway	Nastaran	Samani
*Valmet / Tampere University	Tero	Joronen
*VTT Technical Research Centre of Finland Ltd.	Tom	Granström
*Wärtsilä	Kaj	Portin
Zurich University of Applied Sciences (ZHAW)	Matthias	Eckl
Zurich University of Applied Sciences (ZHAW)	Thomas	Pielhop



THANK YOU FOR TAKING PART!

Keep yourself updated on follow-ups from the conference, and other activities within Bio4fuels:

Web: <https://www.nmbu.no/en/services/centers/bio4fuels>

LinkedIn: <https://www.linkedin.com/company/fme-bio4fuels/>