

Sustainable Aviation Fuels - Design, Production and Climate Impact

789. WE-Heraeus-Seminar

24 May - 27 May 2023

at the Physikzentrum Bad Honnef, Germany

**WILHELM UND ELSE
HERAEUS-STIFTUNG**



Program

Wednesday, 24 May 2023

16:00 – 20:00	Registration	
From 18:00	<i>BUFFET SUPPER and informal get-together</i>	
20:00 – 20:10	Scientific organizers	Opening and Welcome
20:10 – 20:40	Denzil Moodley	Catalysis for Sustainable Aviation Fuels: Fischer-Tropsch pathways
20:40 – 21:10	Katharina Seeliger	Airbus' view on 100% SAF

Thursday, 25 May 2023

08:00	<i>BREAKFAST</i>	
09:00 – 10:00	Bert Weckhuysen	Operando Spectroscopy and Microscopy of CO and CO₂ Activation Processes
10:00 – 11:00	Michael Clayes	Stability of Fischer-Tropsch catalysts studied in-situ
11:00 – 11:30	<i>COFFEE BREAK</i>	
11:30 – 12:30	Peter Pfeifer	Production of carbon neutral fuels and upgrading towards kerosene
12:30 – 12:40	Conference photo (in front of the lecture hall)	
12:40	<i>LUNCH</i>	

Program

Thursday, 25 May 2023

14:00 – 15:00	Jannick Schmidt	Climate impacts of different SAF pathways
15:00 – 16:00	Franziska Müller-Langer	SAF supply as multiblend jet fuel – insight in a demo project
16:00 – 16:30	<i>COFFEE BREAK</i>	
16:30 – 16:45	Stefan Jorda	About the Wilhelm and Else Heraeus Foundation
16:45 – 17:45	Poster Slam 1 (2 min per Poster)	
17:45 – 18:45	Poster Session 1	
18:45	<i>DINNER</i>	
19:45	Round Table Discussion (Denzil Moodley, Bert Weckhuysen, Joshua Heyne, Franziska Müller-Langer, Katharina Seeliger) Moderation: NN	

Program

Friday, 26 May 2023

08:00	<i>BREAKFAST</i>	
09:00 – 10:00	Stephan Schmidt	Production Pathway for SAF via Methanol
10:00 – 11:00	Patrick Le Clercq	Sustainable Aviation Fuels: Composition, Properties, and their Effect on Combustion System Relevant Sub-Processes
11:00 – 11:30	<i>COFFEE BREAK</i>	
11:30 – 12:30	Christiane Voigt	Effect of SAF on contrails and climate – What do we know and what is unknown?
12:30	<i>LUNCH</i>	
	Hot Topic Talks	
14:00 – 14:20	Aleksandr Fedorov	Extracting Knowledge from Literature by Data Science for Development of Highly-Selective CO₂ Fischer-Tropsch Catalysts
14:20 – 14:40	Florent Dubray	Production of Jet-Fuel-Range Olefins via Catalytic Conversion of Pentene and Hexene over Mesoporous Al-SBA-15 Catalyst
14:40 – 15:00	Stefan Bube & Steffen Voß	Methanol-to-Kerosene - Technical comparison with competing pathways for biomass- and power-based SAF

Program

Friday, 26 May 2023

Hot Topic Talks

15:00 – 15:20	Alexander Rabl	Experimental investigation of soot emissions of oxygenated fuel blends in a small aero engine
15:20 – 15:40	Eric Bach	Pressure gain combustion for next generation aero engines
15:40 – 16:00	Moazz Shehab	The influence of biomass characteristics and their uncertainties on the production of sustainable aviation fuel
16:00 – 16:30	<i>COFFEE BREAK</i>	
16:30 – 17:30	Poster Slam 2 (2 min per Poster)	
17:30 – 18:30	Poster Session 2	
18:30	<i>HERAEUS DINNER</i> (social event with cold & warm buffet with complimentary drinks)	

Program

Saturday, 27 May 2023

08:00 *BREAKFAST*

09:00 – 10:00 Joshua Heyne **Some sustainable aviation fuel drop-in constraints and non-drop-in opportunities**

10:00 – 11:00 Hai Wang **On Chemical Properties of SAF: What Chemical Composition is Desirable for Efficient and Low-emission Aviation?**

11:00 – 11:30 *COFFEE BREAK*

11:30 – 12:30 Scientific organizers **Final Discussion /
Concluding remarks and poster awards**

12:30 *LUNCH*

End of seminar and departure