GENERAL INFORMATION

Workshop venue

Dutch Institute for Fundamental Energy Research
DIFFER - visitors address: De Zaale 20
5612 AJ Eindhoven, The Netherlands

Travel & lodging

DIFFER is located at the campus of Eindhoven University of Technology, **near Eindhoven train station** (20 minutes by foot or 5 minutes by bicycle)

Airports in the vicinity of Eindhoven are:

Eindhoven Airport
Schiphol Airport Amsterdam
Brussels Airport

More information regarding travel including a map of the campus, as well as a **selection of hotels** see

www.differ.nl/kerogreen-workshop/travel

Contact

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KEROGREEN in a NUTSHELL

KEROGREEN is a Research and Innovation Action (RIA) funded by the European Commission under the Call Topic "Competitive low-carbon-energy - new knowledge and technologies" (H2020-LCE-06-2017) in the H2020 Work programme "Secure, Clean and Efficient Energy".

The main goal of this 4-years project is to develop and test an **innovative conversion route to the production of sustainable aircraft grade kerosene from water and air powered by renewable electricity**. The KEROGREEN conversion route is based on plasma driven dissociation of air captured CO_2, solid oxide membrane for oxygen separation, Water Gas Shift for syngas and Fischer-Tropsch (FT) synthesis for kerosene production.

Partners

DIFFER – Dutch Institute for Fundamental Energy Research
KIT – Karlsruhe Institute of Technology
vito
Cerpotech
HYGEAR
INERATEC

More information: ww.kerogreen.eu

KEROGREEN

Workshop

„Plasma catalysis for renewable Fuels and Chemicals“

15 November 2019

DIFFER, Eindhoven (NL)

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under grant agreement N°763909

Workshop „Plasma catalysis for renewable Fuels and Chemicals“ - 15 November 2019 - DIFFER Eindhoven (NL)

INVITATION

Renewable energy, whilst copiously generated by sun and wind, mainly comes in the form of electricity. However, electricity only serves approximately 20% of the total demand of the energy system. Other sectors, including the chemical and transportation sectors, prove difficult to electrify. Conversion of electricity into fuels or chemicals, therefore, offers a pathway to sustainability for those sectors. Electrochemistry and plasmolysis, being electrically driven, are ideally suited for coupling the power sector to these other energy sectors.

Plasma technology offers new prospects for the activation of molecules, atoms, radicals and ionised particles interacting with electrochemically active materials, resulting in enhanced productivity and reduced energy consumption. Plasma technology is consistent with future decentralised electricity production, often at remote sites, spread out over large areas, with individual units at the MW scale level, as opposed to the high power plants of today concentrated in urbanised areas. Long distance transport of the gaseous and liquid fuels produced is by pipeline, rather than by far more expensive high voltage power lines.

This workshop is targeted at academia, research organisations and industry aiming at bringing these together in a constructive dialogue. All participants are invited to contribute their views on the topic and to present their research in the form of a poster.

PROGRAM

9:00	**Registration**
10:00	**Welcome** Prof. Richard van de Sanden, director of DIFFER, NL
10:15	**EU Project KEROGREEN: Main Challenges** Adelbert Goede, DIFFER, NL
10:35	**Progress on CO_2 plasmolysis at DIFFER** Prof. Richard van de Sanden, director of DIFFER, NL
10:55	**Synergistic combination of solid oxide electrolyte cells with plasma processes** Dr. Michalis Tsampas, DIFFER, NL
11:15	**Coffee break**
11:30	**Plasma-assisted CO_2 conversion: Computer modelling for a better understanding of the underlying mechanisms** Prof. Annemie Bogaerts, University of Antwerp, BE
12:00	**Development of an all-ceramic cathode for highly efficient CO_2 electrolysis** Prof. Hennie Bouwmeester, University Twente, NL
12:30	**POSTER SESSION with walking Lunch**
14:30	**Conversion of CO_2 into added-value chemicals like CO using microwave generated plasmas – a collaborative project within KIT-IGVP-IPP** Prof. Ursel Fantz, Max Plank Institute for Plasma Physics, DE
15:00	**A pathway to a CO_2-neutral mobility: Plasma Fuel** Stephan Renninger, Stuttgart University, DE
15:30	**The quest for CO_2-free hydrogen - challenges & opportunities of plasma-based methane pyrolysis** Dr. Frederik Scheiff, BASF SE, DE
16:00	**Coffee break**
16:15	**Plenary discussion on the way forward** All Speakers interacting with Audience, **Chair** Prof. Roland Dittmeyer, Karlsruhe Institute of Technology, DE
16:45	**Closing remark** Prof. Roland Dittmeyer, Karlsruhe Institute of Technology, DE
17:00	**End of workshop**

REGISTRATION/POSTER SUBMISSION

Workshop registration

Registration for this workshop is open **until 31 October 2019 , see**

www.differ.nl/kerogreen-workshop/registration

Participation is free of charge but registration is mandatory (number of participants is limited, therefore late registrations may not be accepted)

Poster submission

Each participant is given the opportunity to present a poster at this workshop. Are you working on the development of new fuel or chemical synthesis techniques based on novel materials, both experimental or theoretical, leading to commercially attractive production routes? Do not miss this opportunity to present your work and submit a poster abstract!

Abstract submission is open until **15 October 2019**

www.differ.nl/kerogreen-workshop/abstract-submission

Please use the submission form provided and submit the abstract as an MS-Word file.

Abstracts will be selected by the scientific committee of the workshop (see details on the event website), based on relevance to the workshop topic (note that the posters number is limited)

Poster program available end of October 2019

www.differ.nl/kerogreen-workshop/program