SUSTAINABLE PLASTICS

Joining CCU, Circular Economy and Power-to-X for better Polymers

POSTPONED

27th of April 2020

SuperC, RWTH Aachen, Germany

Programme

Moderation:
Christoph Gürtler, Covestro; Alexis Bazzanella, DECHEMA e.V.

09:00	Registration and welcome coffee
10:00	**Welcome** *Moderators*
10:10	**CO_2 as raw material for sustainable polymers: towards a closed carbon circle** *Walter Leitner, Director MPI-CEC and Professor RWTH Aachen University*
10:40	**Keynote** *Søren Bøwadt, European Comission*
10:50	**CO_2EXIDE – Electrochemical CO_2 conversion to ethylene, ethylene oxide and polyethylene** *Arne Roth, Fraunhofer IGB, Coordinator CO_2EXIDE*
11:10	Coffee break
11:25	**Carbon4PUR – Catalytic conversion of CO/CO_2 mixed gas streams to polyurethanes** *Liv Adler, Covestro, Coordinator Carbon4PUR*
11:45	**PUReSmart – Polyurethane recycling towards a smart circular economy** *Joke De Geeter, Recticel, Coordinator PUReSmart; Karin Clauberg, Covestro*
12:00	**Technical panel: From scientific research to industrial realisation – connections and challenges** *Coordinators of the projects*
12:30	Networking Lunch

SYMPOSIUM JOINTLY ORGANIZED BY Carbon4PUR AND CO_2EXIDE

SUSTAINABLE PLASTICS

Joining CCU, Circular Economy and Power-to-X for better Polymers

POSTPONED

27th of April 2020

SuperC, RWTH Aachen, Germany

12:30	Networking Lunch
13:20	**Sustainability assessment of CO_2-based polymers** *Niklas van der Assen, Professor RWTH Aachen University*
13:35	**Introduction to round tables and Key Notes to round tables** *Moderators of the round tables*
14:15	**Round tables** *(2 sessions a 20 min with 5 min break)* • **Life cycle assessment and potential economic implications** *Johannes Lindorfer, Energy Institute Linz; Bernhard Steubing, Leiden University* • **The role of electrification for a greenhouse-gas-neutral chemical industry** *Alexis Bazzanella, DECHEMA e.V.; Elfriede Simon, Siemens Energy* • **Network building** *Dennis Krämer, DECHEMA e.V.; Andrei Barascu, DECHEMA e.V.* • **Policy as an enabler for CCU technology uptake** *Francisco Koch, South Pole; Marientina Laina, South Pole* • **Public acceptance and perception – obstacle or chance?** *Christopher vom Berg, nova-institute; Ulrich Eimer, EPC*
15:00	Coffee break
15:15	**Summary of round tables** *Moderators of the round tables*
15:30	**Panel Discussion: How to implement carbon capture and utilisation technologies?** *Sucheta Govil, CCO Covestro* *Søren Bøwadt, European Comission* *Walter Leitner, Director MPI-CEC and Professor RWTH Aachen University* *Maximilian Fleischer, Chief Key Expert Siemens Energy* *Eric de Coninck, Low Impact Steelmaking Project Manager ArcelorMittal*
16:30	End of the event

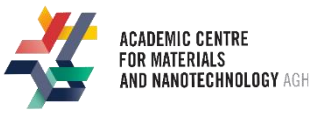
SYMPOSIUM JOINTLY ORGANIZED BY Carbon4PUR AND CO_2EXIDE

CO2EXIDE

The key objective of the project CO_2EXIDE is the development of an electrochemical, energy efficient and near-to-CO_2-neutral process to produce the bulk chemical ethylene oxide from biogenic CO_2, water, and renewable energy.

The CO_2EXIDE technology is currently developed by the collaboration of ten organisations from six European countries, bundling expert knowledge from the fields of surface physics, electrochemistry, apparatus engineering, energy management and communication. The project receives a three-year funding under Horizon 2020, the EU's research, innovation and societal challenges programme. It is assigned to the SPIRE initiative „Sustainable Process Industry“.

www.co2exide.eu



Funding

3-years funding
Programme: EU Horizon 2020
Action: Research and Innovation Action (RIA)
Topic: SPIRE-10-2017
Call: Industry 2020 in the Circular Economy
H2020-IND-CE2016-17

Duration

January 2018 – December 2020

This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 768789.

Carbon4PUR

The EU process industry needs to become less dependent of fossils as source of carbon, and – at the same time – to reduce the greenhouse effect. The project Carbon4PUR tackles the two challenges at the same time: CO/CO_2-rich waste gas streams, *e.g.* from the steel industry, shall serve as potentially interesting alternative carbon-resources for the chemical industry. In Carbon4PUR, we aim to transform steel mill waste gas streams into higher value intermediates for more sustainable polyurethane applications. Both the multidisciplinary consortium and the work are organized along the full value chain starting with the provision and conditioning of industrial emissions from a steel to a chemical company in line with the concept of industrial symbiosis. Carbon4PUR targets on rigid foams for building insulation and polyurethane dispersion resins for wood coatings for market oriented consumer products.

www.carbon4pur.eu

Funding

3-years funding
Programme: EU Horizon 2020
Action: Research and Innovation Action (RIA)
Topic: H2020-SPIRE-8-2017
Call: Carbon dioxide utilisation to produce added value chemicals
H2020-IND-CE2016-17

Duration

Oct 2017 – Sept 2020

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 768919.

PUReSmart

The end-to-end collaborative PUReSmart consortium seeks ways of transitioning from the current linear lifecycle of polyurethane (PU) products to a circular economy model.

Thermoset PU products such as flexible and rigid foams are long-lasting, durable and useful in many different applications. Compared with thermoplastic materials, recycling thermoset PU is a much more challenging process. The PUReSmart project is exploring new methods, technologies and approaches in order to overcome these challenges and transform PU into a true circular material to avoid landfill.

PUReSmart targets the recovery of over 90% of end-of-life PU with the goal of converting it into valuable inputs for new and known products. The project consortium develops smart sorting technologies to separate a diverse range of PU materials into dedicated feedstocks. These feedstocks are then broken down into their basic components as inputs for existing PU products, and as raw materials for a newly designed polymer that merges the durability of thermosets with the circularity of thermoplastics.

www.puresmart.eu

Funding

4-years funding
Programme: EU Horizon 2020
Action: Research and Innovation Action (RIA)
Topic: H2020-NMBP-ST-IND-2018
Call: Smart plastic materials with intrinsic recycling properties by design
CE-NMBP-26-2018

Duration

Jan 2019 – Dec 2022

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 814543.

Registration for free

- Scan the QR Code
- Or visit the events section on www.carbon4pur.eu or www.co2exide.eu
- Or go directly to the registration website: https://dechema.converia.de/frontend/index.php?sub=459.

Costs

Free of charge. You can attend the symposium at no further costs. Registration required.

Contact

Carbon4PUR

www.Carbon4PUR.eu

Dr. Liv Adler (Coordinator)
Email: man.carbon4PUR@covestro.com

Andrei Barascu (Communication Manager)
Email: andrei.barascu@dechema.de
Tel.: +49 69 7564 344

CO_2EXIDE

www.CO2Exide.eu

Dr. Arne Roth (Coordinator)
Email: mail@co2exide.eu

Sabine Spilles (Communication Manager)
Email: spilles@e-p-c.de
Tel.: +49 177 16 92 964

Disclaimer