

14TH CARBON DIOXIDE UTILISATION SUMMIT

9-10 OCTOBER 2019 // DUSSELDORF, GERMANY

Advancing the CO₂ Utilisation Industry through Innovative Applications & Conversion Technologies Developments whilst Adapting to Policy Changes & Meeting Sustainable Targets

SITE VISIT



Thyssenkrupp's Carbon2Chem Pilot Plant - Tuesday 8th October 2019

During the afternoon of Tuesday 8th October, prior to the conference, a limited number of attendees will receive the unique opportunity to visit Thyssenkrupp's Carbon2Chem pilot plant.

There is no extra charge to attend the site visit, but spaces are limited and allocated on a first come first served basis.

EVENT SPONSORS



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For commercial & exhibition opportunities please contact:
Hubert Sosnowski +48 616 46 7059 - hubert@acieu.net
Karol Lewicki +48 616 46 7038 - karol@acieu.net



Dusseldorf, Germany

Following the success of its previous editions, ACI's 14th Carbon Dioxide Utilisation Summit will take place in Dusseldorf on the 9th & 10th October 2019.

During this new European edition of the event, the conference will explore the current state of the industry, including the effect of new policies and sustainability targets, whilst also exploring latest technology development, both on the electrolysis and bio-conversion sides.

The two day conference will cover both general industry topics, such as financing and investment of CO₂ utilisation projects, as well as specific case studies on conversion methods and the difference uses: building materials, e-fuels and chemicals.

The two days event will offer a series of case studies & interactive panel discussions, whilst allowing great opportunities for all the participants to network and develop great business relationships.

Join us in Dusseldorf this October for a highly interactive & informative conference, whilst enjoying the networking opportunities with your peers.

Key Topics

- **Current State & Predictions of the CO₂ Utilisation Market**
- **Updates on Policy & Regulation framing the European Industry**
- **Strategic Outlook & Predictions on Financing & Investment of CO₂ Utilisation Projects**
- **CO₂ Mineralisation – Best Practices**
- **Hydrogen's Role in CO₂ Conversion**
- **Latest Technology Developments in Electrochemical Reduction of CO₂**
- **Best Practices in E-fuels Production & Uses**
- **Advances in CO₂ to Chemicals**
- **Sustainability & Circular Economy of CO₂ Utilisation**
- **Life Cycle Analysis of CCU Projects – Methodology & Process**
- **Bio-conversion of CO₂ – Current Status & Potential**

Opportunities to Meet your Target Audience

For information on available commercial & exhibition opportunities, please contact:

Hubert Sosnowski +48 61 646 7059 /

hubert@acieu.net

Karol Lewicki +48 61 646 7038 /

karol@acieu.net

Speaking Opportunities

If you would like to be considered as a speaker at the event, for a 20-30mins presentation, please submit an abstract for consideration to:

Lauriane Pardoux +44 20 3141 0632 /

lpardoux@acieu.net

EXCLUSIVE SITE VISIT:

Thyssenkrupp's Carbon2Chem Pilot Plant

Duisburg, Germany - Tuesday 8th October 2018



The Carbon2Chem® technical center is built adjacent to the thyssenkrupp Steel Europe site in Duisburg on an area of 3.700 m². The ground-breaking ceremony took place on 2nd November 2016. After 16 months, the demonstration plants were put into operation in March 2018. In addition to a hall for the water electrolysis, a pipeline bridge and a gas purification plant, a laboratory building of 520 m² as well as a building for a workshop, a control room and social rooms were built. The official opening ceremony took place on 20th September 2018 with the premier of the methanol production from cleaned steel mill gases.

The aim of the Carbon2Chem® project is to use sectoral coupling to convert the top gases produced in the steel production into chemical products such as fertilizers, polymers and synthetic fuels.

There is **no extra charge** to attend the site visit, but spaces are limited and allocated on a **first come first served basis**. Please notify your interest for the site visit when booking for the conference.

Site Visit Itinerary

12:30 Start of the site visit registration at the conference venue

13:00 Departure from conference venue to Thyssenkrupp Carbon2Chem Pilot Plant

14:00 Arrival at Thyssenkrupp Carbon2Chem Pilot Plant & Welcome address

14:30 Demonstration and Tour of the plant
(The participants will be split into smaller groups to ensure a better experience.)

15:30 End of tour, Q&A and networking refreshments

16:00 Departure from the plant to the conference venue

17:00 Arrival at the conference venue

Registration is Simple

If you would like to register for this event or wish to find out more information, please contact:

Rohan Baryah +48 61 646 7022 /

rbaryah@acieu.net

DAY 1

Wednesday 9th October 2019

08:00 **REGISTRATION & COFFEE**

09:00 **CHAIR'S OPENING REMARKS & WELCOME ADDRESS**



Stefanie Kesting
President
CO2 Value Europe

09:25 **CONFERENCE PRESENTATION**
Current State & Predictions of the CO2 Utilisation Market

- Identifying and overcoming barriers to successfully commercialising CCU
- Exploring development routes for large scale CO2 utilisation projects
- A look into CCU in China: Drivers & barriers
- Analysing long term vision for CO2 utilisation: Scope, potential impact, economics
- Determining the necessary conditions for healthy and successful market developments
- Predicting market outlook and potential for CO2 based products



Robert Gresser
I2V Innovation to Value
Former EVP Innovation
Leader at Solvay

10:10 **PANEL DISCUSSION**
Updates on Policy & Regulation Framing the European Industry

- Gaining insights on the latest developments on EU policy affecting the CO2 utilisation industry
- Renewable Energy Directive II: Impact on the CCU industry
- Overcoming the uncertainties on applying RED II at a national scale for European countries
- Assessing and comparing how regulation supports "green power" capacity expansion in Europe/US/Asia
- Looking into specific regulations for fuels or chemicals production, related to CO2 based products

Each panellist will give a short presentation- approx.

10mins, before starting the discussion



Ana Šerdoner
Policy & Project Advisor
Bellona



Eelco Dekker
Chief Representative Europe
Methanol Institute



Carmine Marzano
Research Programme Officer - DG
Research & Innovation
European Commission

11:10 **MORNING REFRESHMENTS**

11:40 **PANEL DISCUSSION**
Strategic Outlook & Predictions on Financing & Investment of CO2 Utilisation Projects

- Evaluating funding possibilities for CO2 utilisation projects – National and European scale
- How to convince public or private investors of the viability of CO2 utilisation project
- How to realistically take advantage of tax schemes for CCU – European trading scheme
- Assessing the impact of CO2 tax on the utilisation industry
- Creating partnerships with facilities to capture and use CO2

Each panellist will briefly introduce themselves - approx. 5mins, before starting the discussion



Peter van Gelderen
Partner
ICOS Capital



Errit Bekkering
Business Development Manager
NOM



Michiel Stork
Associate Director
Navigant

12:25 **SESSION ONE**
CO2 Mineralisation – Best Practices

- Latest development in CO2 mineralisation – Challenges & opportunities
- Assessing the best technologies for CO2 to concrete – Best practices
- Removing pollutants from CO2 for mineralisation
- Overcoming potential logistics problems caused by solid transportation
- *Presentation title to be announced*



Bernard Mathieu
Director of the Climate Programme
World Cement Association

13:40 **LUNCH**

14:40 CONFERENCE PRESENTATION Hydrogen's Role in CO₂ Conversion

- Sustainable production technologies
- Current assessment and predictions on hydrogen availability for CO₂ conversion in Europe
- The potential of green hydrogen for CO₂ utilisation
- Exploring blue hydrogen for massive hydrogen production



Marco Waas
RD & I Director
Nouryon

SESSION TWO Latest Technology Developments in Electrochemical Reduction of CO₂

- Using electrolyzers for reduced precursor molecules or ready chemicals
- Exploring chemical & biochemical routes for upgrading electrolyser product to useful fuel & chemical
- Assessing and overcoming CO₂ electrolyzers upscaling challenges

15:25 • *Presentation title to be announced*



Christophe Mihalcea
Director, Fermentation
LanzaTech

- 15:55
- **H₂ production with electrolysis and a biological methanation**
 - Power-to-Gas Process Using Methanogenic Archaea Microorganism
 - Proprietary Technology Addressing CO₂ Recycling – Green Energy Storage – Renewable Fuel Markets
 - Commercial Viable CO₂ Utilization & Key Markets



Francesco Di Bari
CFO
Electrochaeta

16:25 **Panel Q&A**

16:40 **AFTERNOON REFRESHMENTS**

SESSION THREE Best Practices in E-fuels Production & Uses

- Assessing the different types of end-markets (i.e. vehicle, aviation, marine)
- Exploring changes in the fuels industry affecting CO₂
- Maximising on the sustainable impact of CO₂ based fuels

17:10 • *Presentation title to be announced*



Oskar Meijerink
Business Development Manager
SkyNRG

17:40

• **NBC progressing strongly towards construction of the first commercial E-Fuel plant**

- In search for best processes and most cost efficient production.
- Solid Fast track construction
- Products in high demand



Gunnar Holen
CEO
Nordic Blue Crude

18:10 **Panel Q&A**

18:25 **CLOSE OF DAY ONE**

DAY 2

Thursday 10th October 2019

08:30 **REGISTRATION & COFFEE**

09:00 **CHAIR'S OPENING REMARKS**



Stefanie Kesting
President
CO₂ Value Europe

SESSION FOUR Advances in CO₂ to Chemicals

- Exploring production of chemicals with CO₂ as a feedstock
- A look into novel development in CO₂ to polymers
- Highlighting the sustainable advantages of using CO₂ as an alternative feedstock in chemical production

09:05 • *Presentation title to be announced*



Christoph Guertler
Head of Catalysis & Technology Incubation
Covestro

09:25 • *Presentation title to be announced*



Kai Hortmann
Project Leader CO₂ Conversion
Total



Jens Baumgartner
Business Development Manager
Electrolysis
Sunfire

09:45 • **Large Scale CO2 Utilization to Chemicals**



Massimiliano Sala
Product Lead Syngas & Fertilizers
Saipem

10:05 • *Presentation title to be announced*



Dr. Thorsten Jänisch
Researcher - Dept. of Environmental
Engineering
**Fraunhofer - Institute for
Chemical Technology (ICT)**

10:25 **Panel Q&A**

10:55 **MORNING REFRESHMENTS**

11:25 **CONFERENCE PRESENTATION**
**Life Cycle Analysis of CCU Projects –
Methodology & Process**

- Evaluating market willingness and acceptance for premium pricing of carbon neutral products
- Analysing and comparing new carbon capture technologies cost and implementation
- Reviewing the EU efforts about putting together a universal approach to LCA methodology



Solmaz Erika Parsa
Industry & CCS/CCU Innovation
Engineer/Technical Project Manager
Science & Innovation for Climate &
Energy (SICE)
**Department of Business,
Energy & Industrial Strategy
- UK Government**

12:10 **PANEL DISCUSSION**
**Sustainability & Circular Economy of CO2
Utilisation**

- Accounting of CO2 reduction – How to measure the industry's impact on the environment
- Quantifying & qualifying the environmental impact & effect of CCU
- Comparing the challenges faced to the removal of CO2 from the atmosphere and its uses
- Assessing the energy demand for CO2 activation

Each panellist will briefly introduce themselves - approx. 5mins, before starting the discussion



Markus Oles
Innovation & Strategy Projects
Thyssenkrupp



Rudolf Dörpinghaus
President
**IASA e.V. - International
Association for Sustainable
Aviation**



Frank Köster
Head of Network Fuels & Drives of the
Future
Energie Agentur NRW



Damien Dallemagne
Secretary General
CO2 Value Europe

12:55 **LUNCH**

SESSION FIVE

**Bio-conversion of CO2 – Current Status &
Potential**

- Latest development in bio-conversion: fermentation and photosynthesis
- Exploring water splitting related technologies: Latest development & expectations in the next 5 years
- CO2 photoelectrocatalyst: Challenges & opportunities
- Examining alternative biological routes to microalgae such as using H2

14:00

**Biological Carbon Dioxide Utilization (CDU)
Technology for the Production of Low Cost
Industrial Chemicals Utilizing Photosynthesis**



Bruce Dannenberg
President & CEO
Phytonix

14:30

**Algae Based Biofuels – a value creating option
for CO2 utilization**

- Technology development has to focus on the entire chain from CO2 to finished fuels
- Integration with other Renewables can help optimize the CO2 reduction potential
- Out-door, at scale operation a must to obtain scale confidence



Makarand Phadke
Senior Vice President - Innovations
Reliance

15:30

Panel Q&A

15:15

CHAIR'S CLOSING REMARKS

15:25

**END OF CONFERENCE & NETWORKING
REFRESHMENTS**




14th Carbon Dioxide Utilisation Summit

9th & 10th
October
2019

Dusseldorf, Germany

Registration is Simple

If you would like to register for this event or wish to find out more information, you can contact **Rohan Baryah** using any of the following methods:

 +48 61 646 7022

 rbaryah@acieu.net

 <http://www.acieu.net>

 Postal Address:
ACI Europe, 10 Gough Square, London, EC4A 3DE

Registration is Simple

Conference (Includes Access to All
Documentation)
9th & 10th October 2019

£1,695
(Excl. VAT)

Documentation Packet Only

£470.00

Please Note.

Members and customers of all supporting organisations are entitled to a discount off their conference package.

For more information please call Rohan on +48 61 646 7022

Documentation Packet Available

We are selling 14th Carbon Dioxide Utilisation Summit papers at just £445 (+£25 P&P). Simply tick the box on the booking form, send it with payment and your copy will be on its way to you after the meeting. This important manual will be a source of invaluable reference for the future.

About ACI

ACI, a UK owned company, has been running successful conferences in the USA since 1999. Headquartered in Chicago with offices all around the States, ACI opened its European head office at the end of 2005 and has expanded rapidly, launching a series of events in key industries including maritime, energy, oil & gas, cosmetics, chemicals & media.

Terms & Conditions

Payment

Payment must be received within five business days of returning the signed contract. After receiving payment a VAT receipt will be issued. If you do not receive a letter outlining details two weeks prior to the event, please contact the Conference Coordinator at ACI Europe Ltd.

Discounts are available for multiple/group bookings. Please call **Rohan Baryah on +48 61 646 7022** for more information.

Cancellations

Substitutions are welcome up to 24 hours prior to the event. Cancellations must be received in writing no less than 3 weeks prior to the start of the conference; a full credit voucher towards a future ACI conference will be issued. Any cancellation received less than 3 weeks prior to the start of the event shall be deemed to be a breach of this contract by client, and accordingly, no credits will be given. Cancellations must be received in writing by mail or fax three weeks before the conference. Thereafter the full conference fee is payable. If for any reason ACI Europe Ltd decides to amend, cancel or postpone this conference, the conference fee will not be refunded. Furthermore, ACI Europe Ltd will not be responsible for covering airfare, hotel or other costs incurred by registrants. In the event that ACI Europe Ltd cancel or postpone the event, ACI Europe Ltd reserves the right to transfer this booking to another conference to be held in the following twelve months, or to provide a credit of an equivalent amount to another conference within the following twelve months. The construction, validity and performance of this agreement shall be governed in all respects by the laws of England to the exclusive jurisdiction of whose courts the Parties hereby agree to submit.

Accommodation

The cost of accommodation is not included in the event fee. Preferential rates will be arranged with or near the event venue, and all confirmed delegates will be given details of how to book accommodation at this rate in due course.