

Carbon2Chem®

OCTOBER 27–28, 2020 | VIRTUAL CONFERENCE

3RD CONFERENCE SUSTAINABLE CHEMICAL CONVERSION IN INDUSTRY



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PROGRAM

AS OF OCTOBER 22, 2020

3RD CONFERENCE

SUSTAINABLE CHEMICAL CONVERSION IN INDUSTRY

DATE:

October 27–28, 2020

Due to the current situation,
the conference now takes
place entirely virtually.

TUESDAY, OCTOBER 27, 2020

9:30 a.m. **Opening**

9:45 a.m. **GREETING**

Innovations for a climate-neutral industry

Federal Minister Anja Karliczek

Federal Ministry of Education and Research, Berlin

Handing over approval letters to consortium



10:00 a.m. **Framework for a climate-neutral industry**

Patrick Child

Deputy Director General of DG R&I, European Commission

10:15 a.m. **Carbon2Chem® 2016 to 2020**

Prof. Dr. Robert Schlögl

Max Planck Institute for Chemical Energy Conversion, Mülheim an der Ruhr

11:00 a.m. **Keynote**

Federal Minister Peter Altmaier

Federal Ministry for Economic Affairs and Energy, Berlin

11:15 a.m. **CO₂ free steel production: contribution of Carbon2Chem® and other routes**

Dr. Arnd Köfler

thyssenkrupp Steel Europe AG, Duisburg

11:35 a.m. **Tasks for the fundamental research**

Prof. Martin Stratmann

Max Planck Society, Munich

11:55 a.m. **Hydrogen innovations – drivers of sustainable value creation**

Prof. Dr. Ralf B. Wehrspohn

Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e. V., Munich

12:15 p.m. **LUNCH BREAK**

1:30 p.m. **Creating carbon cycles: key to climate neutrality and resource protection**

Tara Nitz

Covestro Deutschland AG, Leverkusen

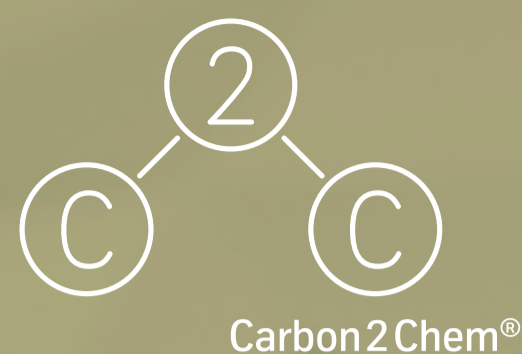
2:00 p.m. **Decarbonising energy-intensive industries – chance or mission impossible?**

Holger Loesch

Federation of German Industries, Berlin

2:30 p.m. **COFFEE BREAK**

During the conference it is forbidden to take pictures of the participants as well as of the presentation content.



3:00 p.m. The chemical industry – seeking and offering solutions for a CO₂-neutral future

Dr. Jörg Rothermel

Verband der Chemischen Industrie e. V. (VCI), Frankfurt

3:30 p.m. PtX technologies contribution to GHG reduction – CatVIV project

Elise Le Goff

Commissariat à l'énergie atomique et aux énergies alternatives, Paris, France

4:00 p.m. Establishment of a new European energy system by 2050

Daniel Muthmann

Open Grid Europe GmbH, Essen

4:30 p.m. Conclusion

Project coordination

4:45 p.m. END OF DAY ONE

WEDNESDAY, OCTOBER 28, 2020

8:30 a.m. Opening

8:45 a.m. System integration – the center piece of Carbon2Chem®

Prof. Dr. GÖrge Deerberg

Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT, Oberhausen

Dr. Markus Oles

thyssenkrupp Steel Europe AG, Duisburg

9:15 a.m. The lime industry's challenging ambitions to achieve a carbon-negative footprint

Thomas Perterer

Lhoist Germany Rheinkalk GmbH, Wülfrath

9:45 a.m. Implementing the Carbon2Chem® technology into other industries

Dr. Ralph Kleinschmidt

thyssenkrupp Industrial Solutions AG, Dortmund

10:15 a.m. COFFEE BREAK

10:45 a.m. Role of the thermal waste treatment

Michaela Schröder

GMVA Gemeinschafts-Müll-Verbrennungsanlage Niederrhein GmbH, Oberhausen

11:15 a.m. A new challenge – reference processes and Carbon2Chem®

Dr. Andreas Geisbauer

Clariant Produkte (Deutschland) GmbH, Heufeld

Dr. Holger Ruland

Max Planck Institute for Chemical Energy Conversion, Mülheim an der Ruhr

11:45 a.m. A European strategy for CO₂-neutral methanol

Dr. Marco Waas

Nouryon, Amsterdam, Netherlands

12:15 p.m. Catalyst and process development for higher alcohol and olefin production

Dr. Dorit Wolf

Evonik Industries GmbH, Hanau

12:45 p.m. LUNCH BREAK

2:00 p.m. Technical solutions for a CO₂-neutral production

Dr. Andreas Frey

Linde AG, Pullach

Dr. Karsten Büker

thyssenkrupp Industrial Solutions AG, Dortmund

2:30 p.m. Industrial scale-up in Carbon2Chem® – design of test campaigns with the demonstration plant

Tim Schulzke

Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT, Oberhausen

Dr. Matthias Krüger

thyssenkrupp Industrial Solutions AG, Dortmund

3:00 p.m. Life cycle assessment of the integrated production of steel and chemicals

Dr. Daniel Maga

Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT, Oberhausen

3:30 p.m. Carbon2Chem® – high expectations for Phase 2

Dialog with stakeholders

4:00 p.m. Conclusion and outlook

Project coordination

4:15 p.m. END OF CONFERENCE

Carbon2Chem®

FURTHER INFORMATION

www.umsicht.fraunhofer.de/carbon-cycle

www.umsicht.fraunhofer.de/kohlenstoffkreislauf

ORGANIZERS



As an institute whose motto is "production without raw materials", we fit perfectly into this project. For several years, the Fraunhofer Institute for Environmental, Safety, and Energy Technology UMSICHT has been conducting research in projects that have set themselves the goal of further reducing both CO₂ emissions and the extraction of fossil fuels, and instead work with "waste products" such as the top gases that inevitably arise in steel production, in order to use them for the production of chemicals such as methanol. That is why, with Carbon2Chem®, we want to recycle carbon after it has formed during steel production, so that it is not released but instead is sustainably reused on site.

At the Max Planck Institute for Chemical Energy Conversion, we find ways to efficiently convert energy into storable and usable forms. In this instance we particularly look for suitable catalysts for the chemical reactions required. Industry generally tries to cut CO₂ through avoidance, and industry in Germany is already working with minimal use of carbon. However, complete avoidance is not possible. With Carbon2Chem®, we are developing a modular system for these industries from which modules for implementing the energy transition can be created.

Together with the scientific community and other industrial partners, thyssenkrupp is the first industrial enterprise to conduct pioneering work in this field. We are not pursuing a single solution, but rather a set of solutions that can also be used by other smelting works and industries. All technology modules should ultimately be interlinkable. Our first application on an industrial scale is in the steel sector – a very CO₂-intensive industry. This way we are undertaking preparatory work in the industrial environment, so that we can eventually extend the modules to other industry sectors. Which is something that benefits us as a diversified corporation.

YOUR CONTACT

FOR ORGANIZATIONAL QUESTIONS

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Assistance

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FOR TECHNICAL QUESTIONS

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