

Press release

nova-Institut GmbH (www.nova-institute.eu)
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Carbon Dioxide as Feedstock for Chemistry and Polymers

The biggest event on CO₂ as chemical feedstock will bring new insights into the utilization of carbon dioxide: www.co2-chemistry.eu

For the second consecutive year, experts will gather in Essen to discuss the subject of CO₂ as the feedstock of the future. After a successful start in 2012, nova-Institute will organise the 2nd Conference on CO₂ as Feedstock for Chemistry and Polymers, 7-9 October 2013 at Haus der Technik in Essen (Germany). The conference is under the patronage of Ms. Svenja Schulze, Minister of Innovation, Science and Research of the German State of North Rhine-Westphalia (NRW).

Life on this planet has thrived successfully for more than 3 billion years and has always relied only on Carbon Dioxide (CO₂) as single feedstock, in combination with water and solar energy. In a similar manner, over the last few years the vision of a "CO₂ economy" has emerged, based on different technologies developed for the capture of CO₂ and its conversion into all the different chemicals, plastics or fuels that our modern day society needs. CO₂ utilization means recycling CO₂ as an everlasting raw material and carbon source in a circular economy. Instead of Carbon Capture and Storage (CCS), these new technologies are called CCU: Carbon Capture and Utilization.

What could appear to be a vision of a far-away future, is already taking its first steps and many different interesting technologies are arising that deserve attention. First investments in energy storages (power-to-gas) and polymers (Polyurethane from CO₂) are realized this year in Europe.

CO₂ as feedstock for chemistry can be used in many different manners and the technologies involved can be clustered into several families: These include the renewable energy storage via CO₂ upgrade, chemicals and polymers from CO₂, the CO₂ mineralization, CO₂ as carbon source for biotechnology for algae and bacteria and the artificial photosynthesis via chemical processes. The CO₂ capture may be derived from flue gases from the industry or directly from the atmosphere.

At the 2nd Conference on Carbon Dioxide as Feedstock for Chemistry and Polymers, 7-9 October 2013 in Essen, Germany, several of these new technologies will be presented and discussed: On the first day, the vision and the framework for a modern CO₂ economy will be shown by representatives from European and German political bodies, the International Energy Agency (IAE) (Paris) and the European chemical industry represented by CEFIC (Brussels). Additionally, the Virgin Earth Challenge (London) will present their vision for *CO₂ utilisation's role in combating climate change*. Also on this first day, some projects from Europe and Japan will give insights into their work on artificial photosynthesis and the sustainability aspects of the CO₂ utilization.

The second day will focus on the feedstock preparation and utilization in the innovative inorganic and organic chemistry and also in the production on “solar fuels”. Following some overviews, several international speakers from the industry and academia will present their most recent projects. Internationally well-known experts such as Prof. Sang-Eon Park from the Seoul National University (South Korea), Prof. Gabriele Centi from the University of Messina (IT) and Prof. Matthias Beller from the Leibniz Institute for Catalysis in Rostock (DE) will join in with representatives from companies such as Evonik (DE), Climeworks (CH), TecNALIA (ES) and Carbon Recycling International (IS).

On the third day, the conference will put its focus on polymers and building blocks made from CO₂ via chemical and biotechnological routes. Highlights of that day will be presentations of companies such as Bayer MaterialScience (DE), BASF (DE), LanzaTech (NZ), Cardia Bioplastics (AU) and Oakbio Inc. (USA) together with those of scientists from the universities of Wageningen (NL), Sydney (AU) and Amsterdam (NL) and research institutions such as CSIRO from Australia, the Wuppertal Institute (DE) and the Bio Base Europe Pilot Plant (BE).

A technical exhibition of products, technologies and development ideas will run in parallel to the conference, as will a poster session on uses of CO₂.

You can find more details about the exhibition and the poster session and register online for the 2nd Conference on CO₂ as Feedstock for Chemistry and Polymers at www.co2-chemistry.eu.

New: Free newsticker on Carbon Capture and Utilization online at www.co2-chemistry.eu/news.

The 2nd Conference on CO₂ as Feedstock for Chemistry and Polymers is supported by the EnergieRegion.NRW: www.energieregion.nrw.de.

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nova-Institute is a private and independent institute, founded in 1994; nova offers research and consultancy with a focus on bio-based and CO₂-based economy in the fields of feedstock, techno-economic evaluation, markets, LCA, dissemination, B2B communication and policy. Today, nova-Institute has 20 employees and a yearly turnover of about 1.8 Mio. €.