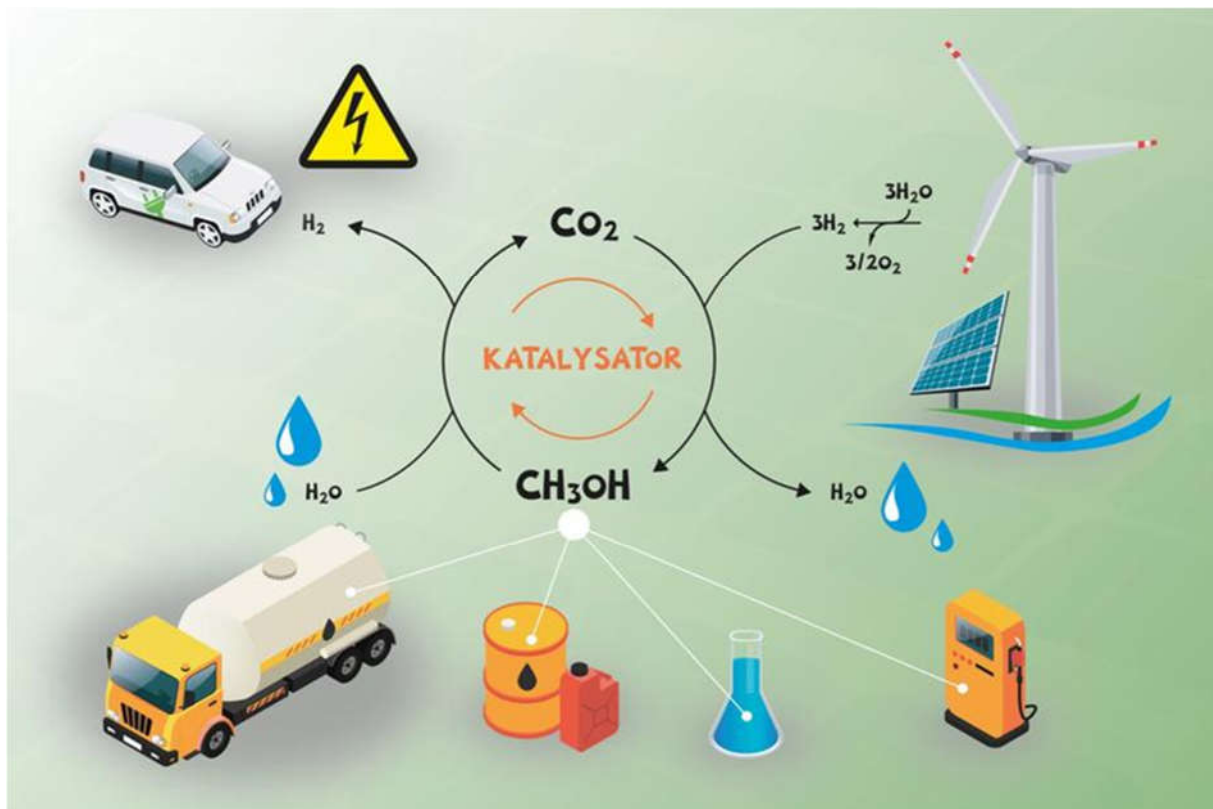


June 2021

"CO₂ 4 Future" - From climate gas to carbon dioxide as a raw material: LIKAT participates in the Woche der Umwelt

Relieving the atmosphere of CO₂ and making the climate gas directly usable for a hydrogen economy in the future is the goal of researchers at the Leibniz Institute for Catalysis in Rostock. The institute is presenting concrete ways to achieve this in its contribution "CO₂ 4 Future" as part of the Woche der Umwelt, hosted by German President Frank-Walter Steinmeier and the German Environmental Foundation.



Green hydrogen from wind and solar energy can be converted into methanol using CO₂ and catalysts. Hydrogen can be released again from the energy carrier methanol in a CO₂-neutral way or it serves as a raw material for the chemical industry.

Digitally, the event on June 10 and 11 will present "an attractive technical program on important future issues" as well as forums for information and discussion, according to the organizers (www.woche-der-umwelt.de).

In addition to exhibitors from business, research and civil society, LIKAT will show how carbon dioxide, a threatening climate gas, can be turned into a valuable raw material. Chemists from Rostock are using nature as a model: plants use CO₂ from the air to produce energy-rich substances together with water and sunlight. In this way, they filter the climate gas out of the atmosphere and at the same time secure the food basis of mankind with the production of "biomass".

"Plants use enzymes, highly specialized molecules, to do this," as Dr. Sandra Hinze, coordinator of LIKAT's contribution to Environment Week, explains. "As catalysts, enzymes make these biochemical processes possible, just as they ensure life-sustaining metabolism in all organisms in the first place."

At LIKAT, researchers are developing technical catalysts to bind CO₂ from the air, activate the inert gas as a synthesis building block and, for example, convert it together with sustainably produced hydrogen to methanol. As the simplest alcohol, methanol can be used, for example, to store "green" produced energy. And it can also be used as a raw material, for example in the pharmaceutical and cosmetics industries or to produce electrolytes in batteries. Dr. Hinze: "It can be an important building block for the hydrogen economy, the development of which is currently the focus throughout Europe."

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