

Foundation of the H2 Business Support Association

Does the current corona crisis offer a chance for redirection?



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The corona pandemic is overshadowing the international debate on the right path to climate protection. The use of fossil fuels is a dead-end street with devastating, long-term consequences for humanity, if not all players worldwide focus on alternative, sustainable energy sources. The deforestation of the world's large forests, the focus on monocultures in agriculture and forestry to maximise yields with intensive use of herbicides and pesticides is causing massive damage to

biodiversity and leading to ever decreasing species diversity. The emission of climate-damaging gases such as methane, nitrogen oxides and carbon dioxide from industry, transport and agriculture intensifies these effects by seriously damaging nature and people.

This, in turn, is creating the conditions for an increase in generalists in fauna and flora worldwide as hosts of viruses and bacteria, as recent findings in biology have shown. The corona epidemic with serious consequences for the whole man-

kind is only one consequence of misguided climate policy and the wrong handling of finite resources.

We have to rethink the whole thing. We have to develop economic and holistic solutions and use them for all areas of our daily life, including in particular a material cycle and from this a clean and affordable energy in the form of green hydrogen. Nutrition/food, health/medicine and climate protection must be considered holistically and general applications and products as well as solutions must be developed. Experts estimate, for example, that the savings potential in the food industry for resource optimisation is 30%. Current trends such as "Personalized Nutrition" speak in favor of automated, flexible solutions that exploit the entire savings potential, due to the higher costs in the industry.

There are solutions for all these tasks. Energy generation plays a central role: The time is ripe for hydrogen H₂ – a complex but still new topic for the food industry. If we take a holistic view of H₂/fuel cell technology, it must be assumed today that there are a large number of technically and economically viable solutions in the building and logistics sector. However, dealing with them requires many years of experience and a deep understanding of all technologies, especially as new scientific findings are constantly being made worldwide. For example, current technology developments show that hydrogen can be obtained in





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The i-Series food safety analyzers care for consumer protection and product safety: They support the need for fast, high-sensitivity examinations for controlled components such as mycotoxins and synthetic antimicrobials contaminating the raw materials for food products. The food safety analyzers are based on the i-Series of integrated UHPLC systems.

Efficient analysis of contaminants in food
including sample preparation

High-sensitivity detection of mycotoxins and synthetic antimicrobials
at maximum residue levels as regulated by EU standards

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using pre-set method, batch and report files

Results and reports available immediately
as soon as each analysis is finished

Green hydrogen is hydrogen from electrolysis with electricity from renewable energy sources in accordance with the electricity criteria for green hydrogen or from biomass, produced in a certified green thermochemical or biological conversion process.

Blue hydrogen is climate-neutral hydrogen from natural gas with CO₂ capture and storage.

Turquoise hydrogen is produced by thermal cracking of methane and pyrolysis. Instead of CO₂, solid carbon is produced, which is used or stored.

Grey hydrogen is obtained from fossil fuels, gas and coal, by means of steam reforming, and is not climate neutral as the CO₂ produced is released unused into the atmosphere, thereby increasing the greenhouse effect.

various ways ("green" e.g. from thermochemical gasification of biomass waste/"-blue"/"grey"/"black" hydrogen see box). Other developments show that the H₂ high-pressure technology that is widely used today can be replaced by lower pressures under certain conditions or even without pressure during transport and storage under certain conditions.

The consulting company mcongress-consult, Bonn, and the CLIMATE TECHNOLOGY CENTER (Bonn/Meckenheim), which is already integrated in international climate protection projects under the UN umbrella, want to set up a business development group H₂. Media partners are the technical-scientific trade magazines FOOD-Lab (distribution in D-A-CH) and FOOD-Lab International (distribution worldwide through distribution partner Kölnmesse for Anuga FoodTec).

The food industry needs an overview of the entire field of technology in order to find economic solutions and make decisions for a company. Hydrogen technology offers diverse applications in transport/mobility + buildings/heating + energy supply + raw material supply. Comprehensive expertise is required, for example to develop tailor-made pilot projects for the food industry. Planning errors in this high-tech sector can be expensive.

We offer you:

- Regular specialist meetings/webinars and communication of the latest technical and scientific findings, so that the

members of the H₂ Business Support Association gain a time advantage;

- Consultation and delivery of solutions - including international use by companies that may be operating worldwide;
- In view of the overall economic and socio-political responsibility of each company, the development of climate protection activities with and through H₂ applications;
- Development of a Green H₂ quality label with support for relevant topics in the food industry environment;
- individual project development and technology procurement for the respective company;

- development of a representation of interests for the FOOD industry in this technology area – international representation – lobbying.
- Scientific events exclusively for the Support Association/Technical Solutions.
- Membership fee: 25.000,00 € plus VAT per 12 months
- Duration: initially two years
- Planned start: September 2020
- Location of the events: Bonn
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The respective production costs of hydrogen and thus the future purchase prices for the food industry differ considerably and also result from the costs of storing CO₂ and are therefore climate neutral. Alternatively, CO₂ is released into the atmosphere and thus production costs are saved, but this does not offer any advantage for the climate and increases the greenhouse effect. Green hydrogen from electrolysis and electricity from renewable energy sources has the highest production costs, but the consumer will receive a "green certificate" for this in the future.

About Thomas Kützemeier (*1958)

Graduate agricultural engineer "Dairy Science" of the Technical University of Munich 1982, 1987-2007 chief lobbyist of the dairy industry at international associations, the joint UN Food and Agriculture Organisation (FAO) and World Health Organisation (WHO). Since 2008 independent consultant, among others to the FAO on the Rio+20 Environmental Agreement, congress and trade fair organiser, among others for Cologne Trade Fair, publishers and associations, from 2010 founder and editor-in-chief, from 2019 also publisher of FOOD-Lab and FOOD-Lab International.

Languages: D, E, FR

About Heinz J. Sturm (*1964)

Craft/engineer, entrepreneur, hydrogen/fuel cell expert and technician EU Know-why Programme, author Bonn Climate Project, owner CTC Bonn. Advisor to the UN Climate Change Secretariat and African and Arab governments. 2012 Sole participant from Germany in the competition of the UN Climate Secretariat to operate an international climate technology centre.

Determination of the fiber content



- » Official analysis procedure L00.00-18 for the determination of total fiber content" in acc. with § 64 LFGB)
- » AOAC 985.29 total crude fiber analysis (the so-called Prosky method)
- » AOAC 991.43 total crude fiber analysis (applicable for the determination of total crude fiber content in grain, beans, vegetables and fruits)

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