

COSMHYC & COSMHYC XL INTERVIEW

Interview with Dr. Marie-Eve Reinert from Steinbeis 2i GmbH

Hydrogen is enormously important for the energy transition as an emission-free energy carrier but to use it, it needs to be compressed.

The Steinbeis 2i GmbH...

...is a subsidy of the Steinbeis Europa Zentrum and connects industry and research in all technology sectors at a European scale. It is offering advice and support to SMEs, industry and research institutions for participating in European research and technology transfer programmes. Steinbeis 2i GmbH sees its purpose in promoting and developing the innovation capacity of the European Union.



Dr. Marie-Eve Reinert is Senior Project Manager “European Funds and Innovation” for Hydrogen at Steinbeis 2i GmbH. She is supporting SMEs & start-ups as well as corporates & regional authorities for designing, financing and implementing collaborative innovative projects in the field of hydrogen. Her focus is on European funding, business models, intellectual property, commercial strategy, and hydrogen projects at regional scale.

In COSMHYC and COSMHYC XL she is in charge of administrative and financial management as well as of communication, dissemination and exploitation, incl. IPR.

1. In COSMHYC, the partners started long-term tests on hydrogen compression in October 2020. What is the status of the four-year project, which focuses on innovative compression solutions?

COSMHYC is developing an innovative compression solution based on the combination of two compression technologies: mechanical compression and metal hydride compression. In the sophisticated interaction of both technologies lies the great advantage of the COSMHYC compression solution. This saves energy, reduces maintenance costs and lowers noise levels. The long-term tests will run until the end of the project to demonstrate these benefits. We are really excited about the results of the preliminary test and looking forward to the final results.



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2 COSMHYC and COSMHYC XL are both funded by the FCH JU, which has the goal to foster the hydrogen economy in Europe. In your view, what steps do we still have to take to be able to utilize hydrogen on a large scale?

Hydrogen compression is a key process for large-scale hydrogen utilization, because hydrogen has a very low density. That's where COSMHYC comes in with its solution: Hydrogen compression must become more efficient in order to provide the required quantities and make the price attractive to end users. But for hydrogen to become widely accepted as an energy carrier, there is also a non-technical factor: social acceptance. At present, many still have safety concerns about hydrogen. However, today's hydrogen technology is very safe, and building trust is central to the technology gaining acceptance on the market.

3 What role does hydrogen play in the energy transition?

Hydrogen is enormously important for the energy transition as an emission-free energy carrier. Of course, it is crucial that so-called green hydrogen is used. In this case, only emission-free, renewable energies are used to produce the gas, for example wind power or solar energy. A huge advantage of hydrogen as an energy carrier is also that it can be used in so many different ways. There are many projects on hydrogen mobility, where cars, buses, trucks, trains or even ships are converted to hydrogen propulsion. Likewise, the gas can also be used for industrial purposes.

4. How do you see the future for hydrogen mobility? Will we soon be refuelling with hydrogen?

We are working on that! We are taking big steps towards the "hydrogen future". In July 2020, the EU published its hydrogen strategy for a climate-neutral Europe. Individual member states also presented ambitious national hydrogen strategies last year, including France and Germany. Thus, climate protection and hydrogen are now high on the political agenda.

Thank you for the interview!