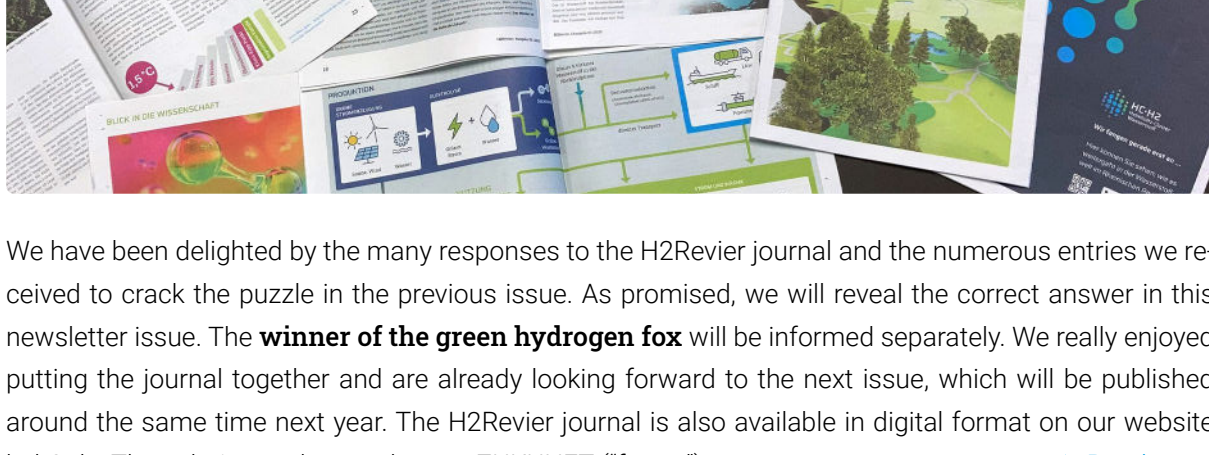


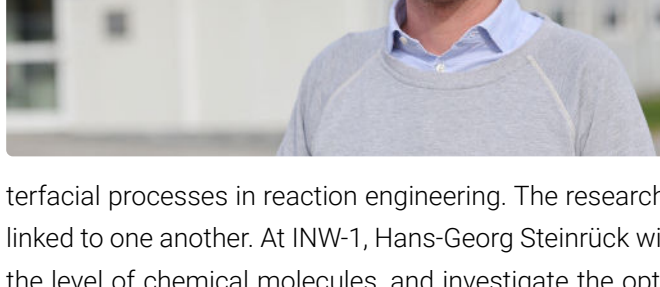
## Good News

### Many Positive Entries for the H2Revier Journal Crossword Puzzle



We have been delighted by the many responses to the H2Revier journal and the numerous entries we received to crack the puzzle in the previous issue. As promised, we will reveal the correct answer in this newsletter issue. The **winner of the green hydrogen fox** will be informed separately. We really enjoyed putting the journal together and are already looking forward to the next issue, which will be published around the same time next year. The H2Revier journal is also available in digital format on our website hch2.de. The solution to the puzzle was: ZUKUNFT ("future"). [▶ Read more](#)

### A New Director for INW



As this year comes to an end, we are proud to announce that another subinstitute, INW-1, now has a new director. On 1 December, **Prof. Dr. Hans-Georg Steinrück** was appointed head of Catalytic Interfaces for Chemical Hydrogen Storage. In the last few years, the 35-year-old physicist has worked in the technical chemistry research group at the University of Paderborn's Department of Chemistry on process intensification and interfacial processes in reaction engineering. The research work of the INW subinstitutes are thematically linked to one another. At INW-1, Hans-Georg Steinrück will conduct research on the smallest scale, i.e. on the level of chemical molecules, and investigate the optimization of active centres for different storage molecules to increase the efficiency of chemical reactions on catalysts. As of December, three of the four subinstitutes at INW now have directors. [▶ Read more](#)

## HC-H2 Close Up

### New Addition to Technical Centre

The stock of machinery continues to grow at the Institute for a Sustainable Hydrogen Economy. A **5-axis CNC milling machine** was recently delivered to the institute. It is both an important instrument and a real highlight in the workshop of the technical centre. With the new milling machine, which has a total weight of 5.5 tonnes, the workshop manager at Brainergy Park can produce individual components for researcher's experimental setups and use them to create tailor-made prototypes. [▶ Read more](#)



### International Network

The Institute for a Sustainable Hydrogen Economy is not only active in the Rhenish mining area, but also pursues **international collaborations** in the field of hydrogen research on storage and transport technologies. In just two years since being established, INW has already received a number of delegation visits from countries including Vietnam, South Korea, Australia, and Oman, which resulted in very fruitful discussions. This is something we are very proud of and we look forward to inspiring talks and discussions with international players from the field of hydrogen in future.

### Project Meeting in Erkelenz

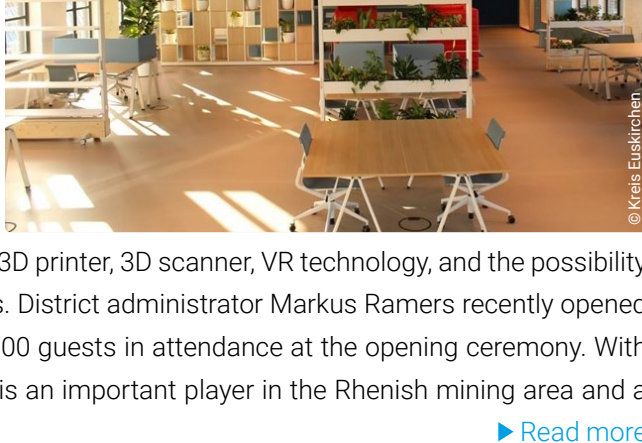
One year following the launch of the first **HC-H2 demonstration project Multi-SOFC**, the project's annual meeting took place at the start of December. Robert Bosch GmbH, Hydrogenious LOHC NRW, Hermann-Josef-Krankenhaus (HJK) hospital, and the Institute for a Sustainable Hydrogen Economy (INW) met at HJK's training centre in Erkelenz to discuss initial results and further project planning. Also present: Stephan Muckel, Mayor of the city of Erkelenz. As Chairman of the Hermann-Josef Foundation, he has supported the demonstration project at Erkelenz Hospital from the outset right from the start. The objectives of the project are to significantly reduce CO2 emissions and achieve a more efficient energy supply at the hospital. The partners aim to demonstrate the innovative combination of two new hydrogen technologies by the end of 2026 and to therefore evaluate a more climate-friendly and more cost-effective solution in the long term. The demonstration project is intended to serve as a globally visible model for the future energy supply of large buildings. The German Federal Ministry of Education and Research is providing the Multi-SOFC project with € 23.6 million in funding. [▶ Read more](#)



## Focus on the Rhenish Mining Area

### Opening of Ideas Incubator in Euskirchen

The fifth hydrogen round table in Euskirchen took place at the end of November – this time featuring a presentation by Marc Koopmans from Open Grid Europe GmbH on the current status of hydrogen infrastructure development in Germany. Maximilian Metzemacher, climate protection manager and hydrogen coordinator for the district of Euskirchen, proudly announced that the fifth round table **was taking place in a new location, namely the ideas incubator for a sustainable economy (Ideenfabrik Nachhaltige Wirtschaft)**, located at the Alte Tuchfabrik site. The new incubator for sustainable activities is intended to provide a platform for networking, sharing ideas, and working. It will provide a location to help shape the path towards a sustainable transformation together with industry and companies from Euskirchen. In addition to a modern co-working space, there will be workspaces for every requirement as well as a digital workshop with a 3D printer, 3D scanner, VR technology, and the possibility to create your own product ideas and prototypes. District administrator Markus Ramers recently opened the new site, giving a speech to the more than 100 guests in attendance at the opening ceremony. With its hydrogen initiative, the district of Euskirchen is an important player in the Rhenish mining area and a partner of HC-H2. [▶ Read more](#)



### Award for Pioneering Structural Change Project

As a pioneering industrial transformation project, IN4climate.RR was awarded the **"outstanding regional industrial initiative 2023"** seal by the **Federal Ministry for Economic Affairs and Climate Action** and the service and advice centre for regional industrial initiatives. This year, the awards were focused on the topic of the industrial transformation. The initiatives presented with the award will now be able to use the "outstanding industrial initiative" seal to highlight their pioneering role in the industrial transformation. IN4climate.RR is a pioneering project focused on structural change in the Rhenish mining area and is therefore an important partner of HC-H2. The Federal Government and state government of North Rhine-Westphalia (NRW) are supporting the sustainable transformation of industry by providing projects such as IN4climate.RR with a total of more than € 14.8 billion in funding. The state government of NRW is supporting Federal Government funding with funds from its own budget. To date, 157 projects have been approved with a funding volume of around € 1.44 billion. [▶ Read more](#)



## HC-H2 Documentary series: The colours of hydrogen Wasserstoffs

### Part 2: blue



Just like grey hydrogen, blue hydrogen is also produced using climate-relevant gases such as CO<sub>2</sub>. Natural gas is mixed with steam and split into water, carbon dioxide, and hydrogen at a high temperature. The energy needed to produce the required temperature (500 °C) comes from fossil energy carriers such as oil, coal, and natural gas. In contrast to grey hydrogen, the **CO<sub>2</sub> released** during the production of blue hydrogen is captured before it can reach the atmosphere – using a **technique known as carbon capture** – and stored underground. The goal remains, however, to produce green hydrogen in a carbon-neutral manner. [▶ Read more](#)

## Events

### Strengthening of the Brainergy Park Network

At the start of December, our HC-H2 Brainergy Park Connect event series took place for the sixth time. Residents of the future industrial park on the outskirts of the town of Jülich as well as anyone hoping to become a resident were invited to the event. With the year drawing to a close, the HC-H2 hydrogen network team NRW **took a look back at this past year and focused on a number of highlights from 2023**. In October, Jan Weisel, Managing Director of VALERES Industriebau GmbH, presented the modular design behind the technical centre recently handed over to INW. Valeres designed, planned, and built the centre, which – thanks to the VALERES modular system – was not only completed in unusually quick time, but is also sustainable, tailored to the needs of the user, and features an impressive architectural design. [▶ Read more](#)

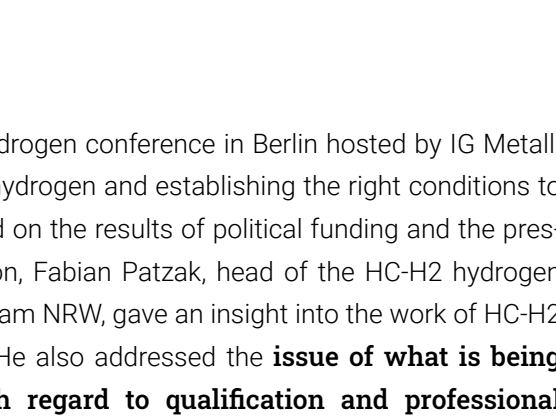


### Scientific Exchange for the Future

The scientific series of events "HC-H2 Science Spotlight" continued in October and November, featuring interesting presentations from Prof. Raimund Horn (Institute of Engineering Reaction Technology, TU Hamburg-Harburg), Prof. Michael F. Toney (Chemical and Biological Engineering and Materials Science and Engineering, University of Colorado Boulder), and Prof. Dr. Ingo Krossing (Institute of Inorganic and Analytical Chemistry, University of Freiburg). For the early-career scientists at the Institute for a Sustainable Hydrogen Economy (INW), this was a **great opportunity** to exchange ideas with experts from the field of hydrogen research in a **small group and in a personal setting**, and to gain perspectives for the future. Once a month, INW invites an expert in their field to give a specialist presentation followed by the opportunity for questions and discussion.

### A Hydrogen meet&connect at Brainergy Park

The Hydrogen Hub Aachen visited INW at Brainergy Park at the start of November. During the **Hydrogen meet&connect event series**, Prof. Peter Wasserschheid, the founding director of INW, presented the Helmholtz-Cluster Hydrogen (HC-H2) and its ongoing projects. Following an interesting discussion, the participants visited the technical centre before coming together to network over snacks and drinks. [▶ Read more](#)

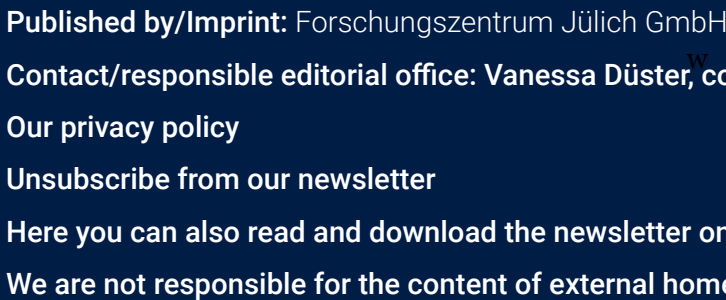


### Hydrogen Conference in Berlin

At the end of November, INW was invited to the 3rd hydrogen conference in Berlin hosted by IG Metall. After previous events had focused on the demand for hydrogen and establishing the right conditions to get the market up and running, this conference focused on the results of political funding and the presentation of the first campaigns. During his presentation, Fabian Patzak, head of the HC-H2 hydrogen network team NRW, gave an insight into the work of HC-H2 and INW. He also addressed the **issue of what is being done with regard to qualification and professional training opportunities** in the context of research on innovative hydrogen technologies as well as cooperation with industrial companies, research institutes, and networks. As a large industrial trade union, IG Metall is positioning itself in the context of industrial transformation also in the area of hydrogen. [▶ Read more](#)

### We Wish You a Merry Christmas!

Finally, we would just like to wish you and your families and friends a very merry Christmas, a wonderful end to the year, and a great start to the new year! Here at INW, we are already excited to see what events, surprises, and innovative hydrogen news 2024 will have in store for us. We will make sure to keep you up to date!



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