



## H<sub>2</sub> Electrolysis Test Centre Opens

TU Graz is strengthening its hydrogen infrastructure at the Inffeldgasse campus with federal funding totalling ten million euros. The new electrolysis test centre and the test bench extensions for fuel cells and high-temperature burners consolidate the university's leading position in European hydrogen research.

**Philipp Jarke**

The new hydrogen electrolysis test centre on Campus Inffeldgasse is a unique piece of infrastructure in Austria for the development and testing of hydrogen technologies on an industrial scale. Electrolysers with a total capacity of 1.6 to 2.5 megawatts will be installed on a 250-square-metre test field. A dedicated transformer station ensures a stable power supply, which enables researchers to simulate a range of supply scenarios. This is particularly relevant when up to 50 kilograms of green hydrogen are produced per hour in full operation. The hydrogen is stored at a pressure of 80 bar in an 18-metre tank. From there, it flows via a 315-metre-long pipeline to several institutes on campus, where it is now available around the clock for research and testing.

In summer 2022, the Austrian federal government provided 10 million euros for the expansion of the hydrogen research infrastructure at TU Graz. Of this, 4.5 million euros have now been invested in the new H<sub>2</sub> electrolysis test centre, with the remaining 5.5 million euros allocated to a new test rig for fuel cell stacks, expanding high-temperature burner test facilities, a gas mixing station, compressors, and analysis, measurement, and safety technology.

### LONG-TERM TESTING OF ELECTROLYSIS SYSTEMS

"The new electrolysis test centre provides ideal conditions for long-term tests, accelerated ageing tests, and analysis of degradation behaviour and system reliability for various electrolysis systems and technologies," says Alexander Trattner from TU Graz's Institute of Thermodynamics and Sustainable Propulsion Systems and CEO of the HyCentA Competence Centre.

"For the first time, the investments will enable a fully integrated research ecosystem for hydrogen technologies with close scientific collaboration from basic research in materials science to laboratory-scale tests and pre-industrial applications on a megawatt scale," adds Viktor Hacker, head of the Institute of Chemical Engineering and Environmental Technology and spokesperson for the Research Center for Green Hydrogen and Fuel Technologies at TU Graz.

At Campus Inffeldgasse, 250 scientists are working on the topic of hydrogen – from fundamental research to hydrogen production, storage, and distribution, as well as its subsequent use in vehicles, power plants and industrial applications. This expertise and state-of-the-art research infrastructure make TU Graz the leading hydrogen university in Austria.