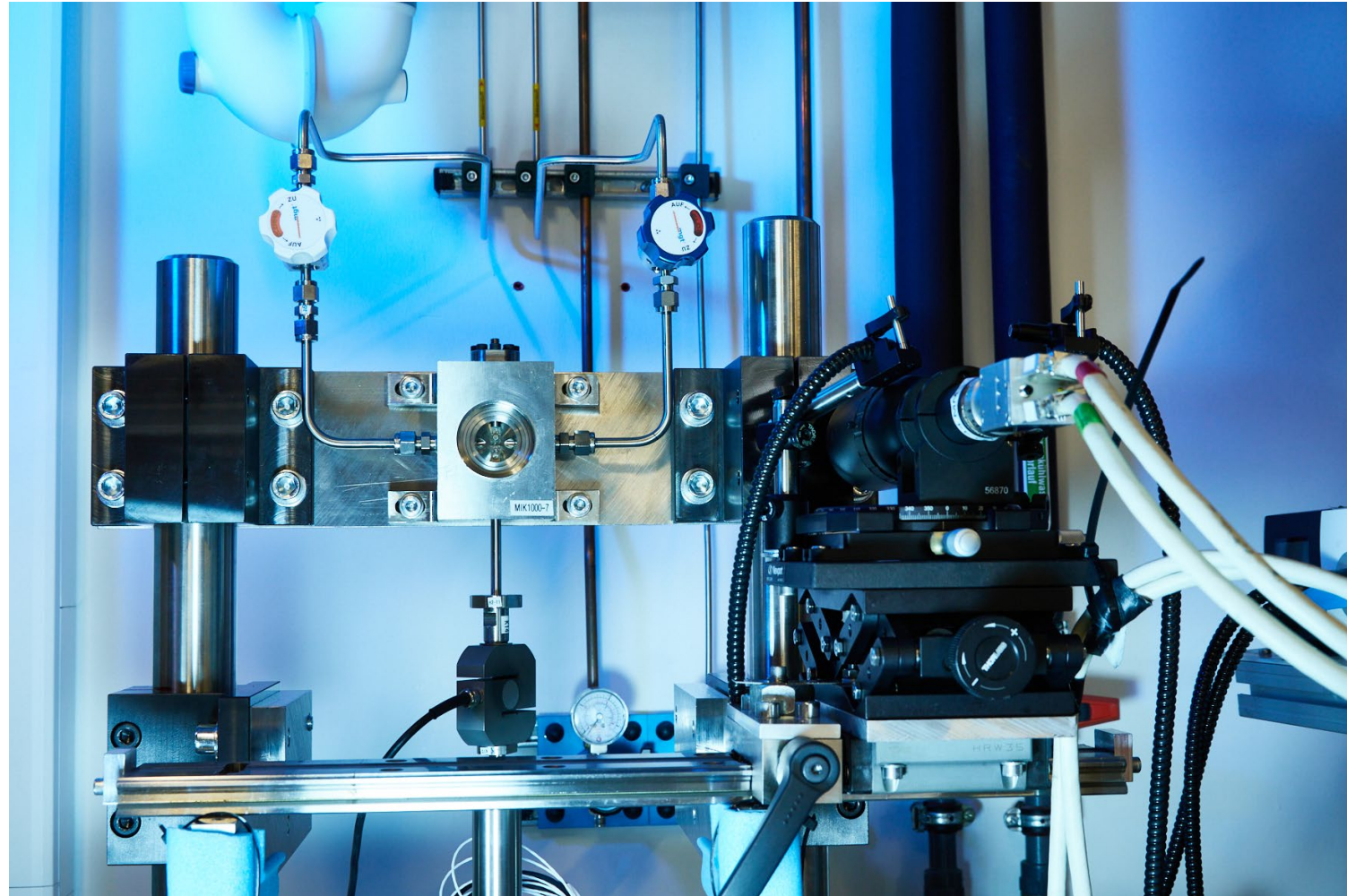


## HyLife project start

### Faster qualification of components in hydrogen applications:

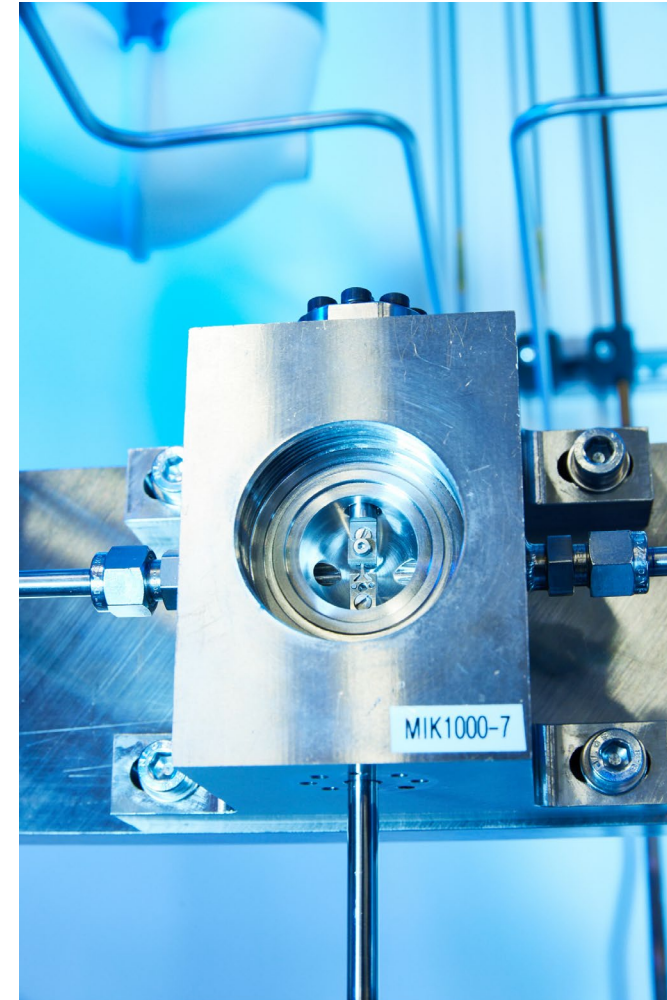
### Start of a research project by Fraunhofer IWM and the National Institute of Standards and Technology NIST

Figure 1



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Figure 2



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The hydrogen gas micro-autoclave can be used to perform quasi-static tensile tests as well as mechanical fatigue and fracture experiments on micro samples up to a hydrogen gas pressure of 5 MPa (50 bar). The chamber of the micro-autoclave can hold a maximum amount of pressurized hydrogen equivalent to 4 liters of hydrogen at atmospheric pressure.

Fig. 1: Hydrogen gas micro-autoclave setup for in-situ mechanical testing in gaseous H<sub>2</sub> on micro specimens.

Fig. 2: Micro tensile specimen (6 mm length, bar width 0.4 mm) mounted in specimen holders.