

Experimental investigation of the effects of sound irradiation on the water management of fuel cells

Institute of Internal Combustion Engines
and Fuel Cells



Description

Acoustic Airflow Excitation (AAE) has been proven to enhance power and facilitate water removal in fuel cells within specific boundary conditions and in ex-situ experiments. The applicability of this sound-based concept on functioning fuel cells, however, has not been proven yet. In this thesis, an existing experimental setup for AAE on a single cell should be systematically expanded, improved and parametric studies on AAE should be conducted.

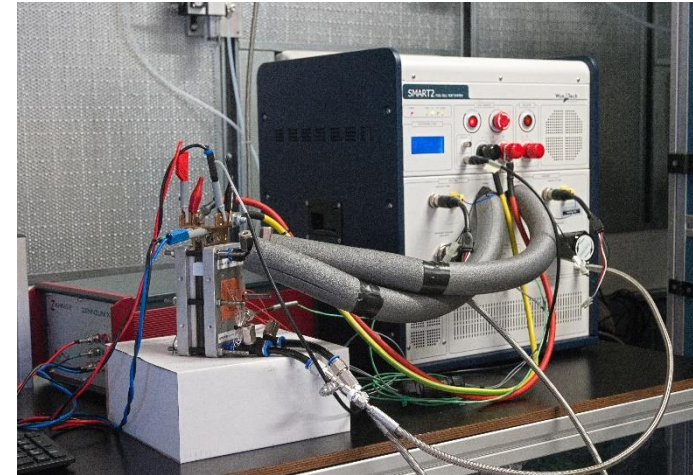
Your responsibilities

- Literature research on acoustic excitation methods for water removal in fuel cells
- Critical analysis of the current test-bench, identification of optimization potentials and improvement of the experimental setup
- Parametric studies on AAE

Prerequisites

- Basic knowledge in the field of hydrogen fuel cells
- Laboratory experience with fuel cells would be helpful
- High initiative, creativity and analytical thinking
- Very good German- or English, both written and spoken.
- Independent working.

The TU Braunschweig strives in all areas and positions to reduce underrepresentation in the sense of the NGG. Therefore, applications from women are particularly welcome and may be given preferential consideration in accordance with §11 NGG. Severely disabled persons will be given preference in the case of equal suitability. Proof must be enclosed. Personal data is stored for the purpose of the application process.



Starting: As soon as possible

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